

S
621.31
N7t
1976
Vol. 14

BOARD OF NATURAL RESOURCES

PLEASE RETURN

STATE DOCUMENTS COLLECTION

MAY 23 1979

MONTANA STATE LIBRARY

330 E Lyndale Ave.

Helena, Montana 59601

VOLUME 14

TRANSCRIPT OF PROCEEDINGS

I N D E X

Colstrip 3 & 4

WITNESSES

Page

January 20, 1976, Tuesday 2137

ROBERT LABRIE (continuation)

Cross, by Department of Natural Resources
and Conservation (continuation) 2138

Cross, by Northern Cheyenne Tribe, Inc. 2213

Cross, by Northern Plains Resource Council 2230

Redirect, by Applicants 2265

Re-cross, by Department of Natural Resources
and Conservation 2272

DAVID H. KNIGHT

Written Direct Statement 2281

Cross, by Department of Natural Resources
and Conservation (continuation) 2296

1 TUESDAY, JANUARY 20, 1976

2
3 The hearing reconvened at 8:50 A.M. on Tuesday, January 20,
4 1976, in the Chambers of the Montana House of Representatives,
5 State Capitol, Helena, Montana.

6 The Honorable Carl M. Davis, Hearings Examiner, presided
7 over the proceedings.

8
9 APPEARANCES:

10 Applicants:

11 William M. Bellingham, Esq.
12 John L. Peterson, Esq.
John Ross, Esq.

13 Department of Natural Resources and Conservation:

14 Arden E. Shenker, Esq.
Donald MacIntyre, Esq.

15 Northern Cheyenne Tribe, Inc.:

16 Peter Michael Meloy, Esq.

17 Northern Plains Resource Council:

18 Leo Graybill, Jr., Esq.

19
20 The following proceedings were had:

21
22 HEARINGS EXAMINER: Ready to proceed further?

23 MR. BELLINGHAM: Prior to any further questioning,
24 I would like to, if I may, have leave of the hear-
25 ings examiner to direct a statement to the testimony
26 as well as to further exhibits. In the statement
27 of testimony of Robert Labrie, page 12, line 20, the
28 word four, the second word in the sentence, should be

1 three. I might state also at this time that the ori-
2 ginal statement has been changed to read that way.
3 Yesterday, when I moved the admission of various ex-
4 hibits referred to in Mr. Labrie's testimony, I neg-
5 lected to mention exhibit number 104, which is men-
6 tioned in the supplemental statement of Mr. Labrie.
7 At this time, I move the admission of applicants'
8 exhibit 104 and renew our previous request for the
9 introduction of exhibit 119 entitled, The Montana
10 Power Company System Study, the so-called Bechtel 1964
11 Report.

12 HEARINGS EXAMINER: Very well, it will be noted
13 you're moving the exhibits and no ruling will be made
14 until the conclusion of the cross-examination. You
15 may proceed, Mr. Shenker.

16
17 CONTINUATION OF EXAMINATION OF ROBERT LABRIE

18 Cross, by Department of Natural Resources and Conservation

19 By Mr. Shenker (continuing):

20 Q Yesterday, Mr. Labrie, we had some conversation on the sub-
21 ject of environmental studies that may or may not have been
22 conducted in connection with the investigation of alternatives
23 before the selection of Colstrip Units 1 and 2. Do you re-
24 call that discussion?

25 A Yes, I do.

26 Q You will agree with me, will you not, Mr. Labrie, that when
27 you were deposed at that time under oath, it was your view
28 that there was no written report on any environmental con-

1 siderations for the alternative sites?

2 A There is no written report that deals strictly with environ-
3 mental considerations of the alternative sites, this is
4 correct.

5 Q And, you will also agree with me, will you not, that there
6 were no environmental studies done on the Colstrip sites be-
7 fore the selection of Colstrip Units 1 and 2, although Bech-
8 tel had done their studies on the Colstrip sites undoubtedly
9 including whatever they thought was appropriate for environ-
10 mental purposes there?

11 A I believe that I said yesterday that environmental matters
12 were taken into consideration in the selection of the Colstrip
13 site but we didn't hire Westinghouse Environmental Services
14 or somebody that was oriented only towards environmental work
15 to do a study, this is correct.

16 Q Other than Bechtel and the general work that you asked them
17 to do for the Colstrip sites themselves, there were no en-
18 vironmental studies undertaken prior to the selection of
19 Colstrip Units 1 and 2; that would be correct, would it not?

20 A The reason I am hesitating is that at some point in time we
21 did have Montana State University working in this general area.

22 Q That came after you selected Colstip, was it not?

23 A I believe it was. Well, now wait a minute. I can recall
24 meeting with Dr. Richard Hodder and other people in the
25 agricultural department area along about that time, but I
26 can't tie down whether it was before Colstrip was selected
27 or after, and discussing applying his reclamation studies
28 that he had done to a more general environmental consideration

1 of the land use around the area.

2 Q Would it help your recollection any to know that when your
3 deposition was taken some ten months ago, you did not then
4 believe that there had been any environmental studies done
5 prior to the selection of the Colstrip sites?

6 A That doesn't surprise me. This thought has just come to my
7 mind; I can remember doing that but I can't precisely say the
8 time that it was done.

9 Q All right, sir. Now I promised you yesterday, Mr. Labrie,
10 that we would have some discussion on the subject of delays;
11 I don't want to disappoint you on that promise. So, let us
12 talk about that one briefly. Over a year before May of 1975,
13 that would be some time before May of 1974, you as the chief
14 liaison for the applicants on the project, with the Bechtel
15 Power Corporation your prime contractor, were looking at the
16 necessity for delay of the 700 megawatt units at Colstrip,
17 isn't that true, sir?

18 A I believe that that would be true. When we met with the
19 Governor, we asked that the state consider seriously waiving
20 the 600 days; this was in May of 1973. By some time prior to
21 May of 1974, I believe we were aware of the fact that the
22 Department of Natural Resources actually had let contracts
23 for the impact study that was not going to be completed
24 until August of '74. So, the potential for delay was under
25 serious consideration, surely. Now we, thereafter, delayed
26 the final decision to delay as long as we possibly could in
27 hopes that the Department of Natural Resources would act ex-
28 peditionally after they completed the contracts with the

1 different environmental studiers.

2 Q If we can kind of take a look back at your game plan, the
3 idea as I understand it was that you hired Westinghouse to
4 come out as quickly as possible with their environmental
5 analysis; you pushed them to accelerate their pace; they
6 did come out with an analysis in November of 1973; you
7 quickly moved to have a meeting with the Westinghouse rep-
8 resentatives explaining their analysis to the Department of
9 Natural Resources and other state government representatives
10 because you wanted a quick decision on a report from the
11 Department of Natural Resources. All that is correct, in
12 terms of the game plan, isn't that right?

13 A I don't know that I understand what you mean by a quick de-
14 cision on a report.

15 Q Well, you wanted them to come out with the recommendations,
16 which the statutes provided for a 600 day study, at some time
17 very soon after November of 1973.

18 A That's right; and this is the reason that we hired Westing-
19 house; it was to implement this thing and to provide the state
20 with as much background data as possible so they could move
21 promptly in order to make the 1978 schedule.

22 Q In fact what you had in mind was that the state should be able
23 to simply accept the Westinghouse Environmental Analysis and
24 its data and publish, essentially, that information as the
25 necessary Environmental Impact Statement and make its recom-
26 mendations on that basis?

27 A I don't think so, no.

28 Q Oh, you thought the state should do its own investigation the

1 same way Westinghouse did?

2 A I assumed the state would use the Westinghouse report as
3 background data and I was sure that they were going to reach
4 their own conclusions; so, we didn't have in mind that they
5 would take the Westinghouse stuff verbatim and use it without
6 any effort of their own.

7 Q Within a year after the Westinghouse analysis was printed,
8 and two months before the Department of Natural Resources
9 made its preliminary recommendations in its draft Environmen-
10 tal Impact Statement, you had already made the final decision
11 to delay the Colstrip Units; that's true, isn't it?

12 A No.

13 Q That's not true?

14 A I don't think so; not as I recall. The state issued their
15 draft statement in about November, as I recall; you can
16 correct me if I'm wrong; and two months prior to that would
17 be in September. In September we were actively considering
18 what the consequences of delay would be, and we were ac-
19 tively considering when we would have to make the final de-
20 cision; in other words, when would the horse be out of the
21 barn and there would no longer be the possibility of meeting
22 the 1978 schedule so we would automatically have slipped
23 whether we liked it or not. I don't believe, as I recall,
24 that we met with the five companies and proposed that we
25 contact the manufacturers with whom we had placed purchase
26 orders and release the shop schedules until some time in
27 November or early December.

28 Q The fact of the matter, Mr. Labrie, is that prior to the

1 release of the state's draft Environmental Impact Statement
2 which was November 21, 1974, you had made the final decision
3 to slip that schedule, isn't that true?

4 A As I recall, about the first of November, we contacted the
5 manufacturers and told them to put a hold on it. The reason
6 we did was that the costs were going up very rapidly and if
7 we weren't going to be able to meet that schedule, we had
8 better take a good look at it; so, we did ask them to put a
9 hold on it and, I believe that it was later in the month,
10 in the month of November or early in December, and this is
11 what I can't recall precisely, that we actually met with the
12 five companies and said, "Well, here's the situation, we've
13 examined it, and it's obvious that we have to delay the plan
14 whether we like it or not."

15 Q November 19, 1974, was actually that meeting time, was it
16 not?

17 A That could be; it sounds about right.

18 Q In any event, it was a meeting that took place before you
19 had the recommendations of the State Department of Natural
20 Resources on your application?

21 A That sounds reasonable; the Department of Natural Resources
22 came out shortly after that, I think.

23 Q Indeed, it was not until two months later, the January 1975
24 date, that the department published its final Environmental
25 Impact Statement with its specific conclusions on whether
26 the application should be denied or approved?

27 A That is correct.

28 Q And, of course, it was not until thereafter that you officially

1 informed the Department of Natural Resources that you had
2 already made the decision to delay the schedule?

3 A I believe the first time we made an official statement was
4 either the last of December or early in January at one of
5 the public hearings that the Department of Natural Resources
6 was conducting.

7 Q And the first time that you delivered to the Department of
8 Natural Resources any statement on your behalf, which was by
9 letter from Mr. Coldiron, was after the release of the final
10 Environmental Impact Statement with the recommendations of
11 the department?

12 A That sounds reasonable.

13 Q In your statement for this proceeding, Mr. Labrie, you use
14 the term that you apparently will not be able to maintain
15 the schedule which you had advised the department in January
16 of 1975, that you were going to strive for. The fact is that
17 officially you have slipped that schedule again, which you
18 did advise the department last month by letter from Mr. Ross?

19 A That is correct. I think I should add one thing to that
20 whole line of questioning and that is that in December of 1975,
21 we were visiting with the different vendors and we were con-
22 cerned that we couldn't get a slot for a year later schedule.
23 So, we were somewhat reluctant to officially release a '78
24 date with the hope that some way or another we could coddle
25 up a way to make up the difference and we never did.

26 Q By September of 1974, Mr. Labrie, you already were a possi-
27 mist, were you not, on your ability to meet the schedule that
28 you were discussing at that time?

1 A Yes, and the reason for this was that I had recently met with
2 Albert Tsao and became aware of what the time schedule he
3 was planning was, so I really didn't visualize a decision
4 until some time in January.

5 Q By September of 1974, in the words of your Bechtel colleagues,
6 your pessimism was a result of financial problems, the poli-
7 tical climate and the certification of Colstip Units 3 and 4;
8 isn't that true, sir?

9 A No, sir, that is not true.

10 Q Those are Bechtel's words, aren't they?

11 A That is Chuck Hochgesang's memo after a conversation with me,
12 I believe. I'd like to see the memo to see what his words
13 were.

14 Q Well, let's use your testimony under oath, Mr. Labrie. You
15 recall when your deposition last was taken, it was taken over
16 a series of dates; the last occasion was May 5, 1975. We had
17 the memos at that time and you had recently reviewed the memos
18 just the day before, the morning before, the deposition. On
19 page 16 of the deposition, you were under oath, of course, at
20 that time, I asked you this question. "Let's go back to the
21 delay question for a little bit now; in September 1974, you
22 then had pessimism as a result of financial problems, poli-
23 tical climate, certification of Colstrip Units 3 and 4 which
24 in your mind are all a part of the same thing, right?"
25 Answer, "This is Bechtel's words, not mine." Do you remem-
26 ber that question being asked and that answer being given?

27 A Vaguely.

28 Q You told the truth, of course, at that time?

1 A Yes, those were Bechtel's words not mine, apparently, and I
2 haven't had the opportunity to review Chuck Hochgesang's memo
3 so I can't add further to it because I can't remember the
4 memo specifically from back in May.

5 Q You had reviewed it just before that deposition was taken, you
6 remember that?

7 A I don't recall doing it but I presume I did.

8 Q I asked you the question on page 13 of the same deposition,
9 "You've reviewed that document before having your deposition
10 taken today, haven't you?" Answer, "I just glanced at it
11 this afternoon." Question, "Mr. Peterson showed it to you,
12 didn't he?" Answer, "Yes."

13 MR. BELLINGHAM: May we interpose an objection at
14 this time? I think it's proper procedure to show the
15 witness a copy of the deposition and let him follow
16 along with you.

17 MR. SHENKER: Show him your copy, Bill; if you
18 want to delay, go ahead.

19 MR. BELLINGHAM: If you'll give me the date, page
20 number and the line and so forth, we can do it.

21 MR. SHENKER: Well, I did once but I'll do it again;
22 May 5, 1975, page 16 was the first series of questions,
23 page 13 was the last.

24 MR. BELLINGHAM: I think it's normal for opposing
25 counsel doing the interrogating to do this and not the
26 job of the counsel for the witness to do it.

27 MR. SHENKER: You are such an abnormally effective
28 counsel for your witness, Bill, I thought that you'd

1 do the abnormally right thing.

2 MR. BELLINGHAM: That's the kindest words that
3 you've said during the entire proceedings, even with
4 tongue in cheek.

5 HEARINGS EXAMINER: Would you hand him another
6 copy, if you have another copy, please, and you can
7 refer to the pages, and you can read them over before
8 you have to answer, Mr. Labrie.

9 (Witness given document.)

10 A All right; I think what I said there is what I'm still try-
11 ing to say.

12 Q Good. Have any of the reasons for the delay of the schedule
13 since September of 1974 dissipated as of today?

14 A Well, we've got further delay; I don't know if that's dis-
15 sipation; they've been more aggravated, let's put it that way.

16 Q In your statement, Mr. Labrie, on page 11, you described the
17 total megawattage for the four Colstrip units at 2,060 mega-
18 watts?

19 A Yes, sir.

20 Q Well, that's a number, of course, that we've seen before in
21 general discussion, but of course, 2,100 is also a number
22 that we've seen from time to time. Would you explain why
23 there is sometimes a reference to 2,060 and sometimes a
24 reference to 2,100?

25 A Twenty-one hundred comes from assuming that units 1 and 2
26 have a rating of 350 megawatts; this has been termed in past
27 testimony to be the nominal rating; the actual net capability
28 of the units is approximately 330 megawatts so that if you

1 take the two 350 megawatt units and you add that to two
2 700's, you get 2,100. If you take the actual net capability
3 of 330 megawatts times two, it's 660 plus the 1400 for units
4 3 and 4, and that gives you 2,060.

5 Q Three hundred thirty megawatts is precisely the level at
6 which Colstrip 1 was actually operating when we visited it
7 last Friday, is that right?

8 A Yes, by coincidence.

9 Q Yes. When you take a 330 megawatt rating for any particular
10 unit, you may take a nominal rating, you may take a name
11 plate rating, you may take a load factor rating or any num-
12 ber of references that can be used?

13 A That's right.

14 Q When you take a 330 name plate rating, which is the name
15 plate rating for Colstrip unit 1, that does not mean, I take
16 it, that you will never have more than 330 megawatts evolve
17 from the unit?

18 A That's right.

19 Q You may have as many as how many megawatts from a 330 mega-
20 watt unit?

21 A Well, on a gross basis, without subtracting plant usage, we
22 anticipate that in the winter time the plant will be able to
23 run at somewhere around 360 to 361 megawatts; now this hasn't
24 been completely tested yet. We have been up to 357 or 8 as I
25 recall.

26 Q And that was in the ball park of general contemplation, is it
27 not, Mr. Labrie, that when you have a name plate rating, you
28 can take a plus or minus 10 percent and know that you are

1 going to be operating within that too?

2 A Well, the name plate rating is the maximum guaranteed by the
3 manufacturer; in addition to this, he puts in an allowance of
4 5 percent for designer, and in addition to that, we can
5 operate the unit at 5 percent over pressure. When you take
6 these things into account, you get something like 360 mega-
7 watts, but that's on a gross basis and then you have to sub-
8 tract out the plant usage to get back to the net rating which
9 we predict to be 330 megawatts.

10 Q When you say net, you mean that which is available for power
11 to be delivered outside of the plant?

12 A That's correct.

13 Q Of course, somebody had to provide the power necessary to run
14 the plant?

15 A That's correct.

16 Q That very station itself is providing that power?

17 A Yes. Wait a minute; would you say that again; I said yes, but
18 I'm not sure --

19 Q It's that station that is providing the power to run the
20 plant?

21 A Oh, yes.

22 Q Would you take a look with me now, Mr. Labrie, at Exhibit num-
23 ber 15 which you prepared and is offered in connection with
24 your testimony.

25 A All right.

26 Q It's entitled Colstrip Number 3 Milestones. I take it there
27 is no Colstrip Number 4 Milestones?

28 A No, Colstrip 4 follows 3 by one year in our planning and so

1 we just showed 3.

2 Q The first three entries on Exhibit number 15 are the same now
3 in the revised form as they were when the exhibit was last
4 tendered. I wanted to ask you about the third of those en-
5 tries; it says, "Governor's meeting and go ahead." I take
6 it that's in May of '73, a reference to a meeting that was
7 planned and held between representatives of the five appli-
8 cants and the Bonneville Power Administration here on be-
9 half of the applicants with Governor Judge.

10 A Yes, and the heads of the pertinent state agencies.

11 Q It's the go ahead that I wanted to ask about. Now you don't
12 mean to imply by the use of that phrase, do you Mr. Labrie,
13 that at that meeting in May of 1973, you received the bless-
14 ings of all state agencies to go ahead with some sort of im-
15 plied promise that you'd be approved for whatever you wanted
16 to do?

17 A No, I think, as I recall, the intention of the meeting with
18 the Governor was to propose Colstrip 3 and 4; make known to
19 him and the appropriate state agencies the time element that
20 we were involved in; and if we got a negative response at that
21 time, we wouldn't have committed the twenty odd million dollars
22 that we have committed now and we, presumably, at that point
23 in time could have dropped the project and done something
24 different. We did not get a negative response, so we pro-
25 ceeded to go ahead and we filed our application with the
26 Department of Natural Resources about a month later.

27 Q By not getting a negative response, you mean you were not
28 informed by the state agencies' representatives that they would

1 most assuredly disapprove anything you wanted to do?

2 A That's right, and I believe we got a letter from the Governor
3 that said they would give consideration of this project high
4 priority and operate on it with dispatch.

5 Q Well, as a matter of fact, this was the first major applica-
6 tion received under the new Utility Siting Act, wasn't it?

7 A That's correct.

8 Q Do you have any reason to believe that it did not receive
9 high priority?

10 A I believe there was not much activity for the first year after
11 the application was filed; I'm not sure I can judge the in-
12 ternal affairs of the Department of Natural Resources enough
13 to know why there wasn't.

14 Q But you could judge it enough to know there wasn't much ac-
15 tivity?

16 A That's right.

17 Q Okay. That judgment, I take it, is based upon what some of
18 your subordinates told you of their contact with representa-
19 tives of the department?

20 A Well, I think with my own contacts with the representatives
21 of the department, also.

22 Q With whom did you have contact with at the department at that
23 time?

24 A I had several meetings with Albert Tsao and Charley Greene,
25 as I recall, and of course, when we filed the application,
26 with the whole department.

27 Q Now if we go on on Exhibit number 15, the next entry that I
28 wanted to ask you about, in which there is a difference be-

1 tween the revised Exhibit 15 and the old Exhibit 15, is the
2 date placed opposite "re-start engineering

3 A Yes.

4 Q Actually, that is a three part entry, it says "re-start en-
5 gineering, release delays, and place major orders." That is
6 only a slight re-wording from the way it appeared previously
7 which said, "re-start engineering, place major orders, and
8 release delays." What do you mean by release delays?

9 A Well, we have 110 million dollars worth of orders placed, that
10 we placed in '73 and '74, and in November of '74 we placed a
11 hold on all of those orders, and we paid delay charges for
12 placing that hold and so on. In December of '75, if we are
13 to get a plan in in 1980, we must arrange for new shop space
14 for these orders and meet with these manufacturers to come to
15 some agreement as to who owes what to who, and proceed with
16 some preliminary engineering so that when the board makes the
17 decision and, presuming that it's a favorable one for us, we
18 can proceed on the scheduled design to have a plant in service
19 in 1980. Release delays, by that was meant to get the vendors
20 started on looking at the problem and finding shop space and
21 so on. We haven't given a vendor the authorization to accumu-
22 late additional charges at this point in time.

23 Q In the original Exhibit 15 that was tendered to us in May of
24 1975, the date for re-start engineering, place major orders,
25 and release delays, was June of 1975. How did you happen to
26 select that date?

27 A Well, when we stopped the vendors in November of '74, most of
28 them were sitting on shop space and asking, "What do we do, we

1 have lost the business, you're going to have to pay for it."
2 We, in the course of negotiation with them one by one, tenta-
3 tively told them that perhaps we could have an answer by about
4 April of '75. By April of '75, it was apparent that the ans-
5 wer would not be available by then and we were talking about
6 June, and felt that June was about the latest date that it
7 would be possible to still maintain the 1979 schedule. This
8 was in excess of what Bechtel had to say, but we thought that
9 by paying overtime and double shifting and things like that,
10 that we could make it up and still be on schedule if we re-
11 leased by June of '75 these orders.

12 Q When you say in excess of what Bechtel had to say, you mean
13 Bechtel thought you couldn't get it done in that time?

14 A Bechtel's first response to us on this was that, "No, that's
15 too tight." But then we had some thoughts about it and sat
16 down with them and they said, "All right, we can see how we
17 can juggle this thing around and possibly squeeze it in in
18 June, but it's going to be more expensive."

19 Q You knew, did you not, Mr. Labrie, that with the commencement
20 of this hearing originally on May 19, 1975, with the Board of
21 Health hearing scheduled to commence on June 5, 1975, that it
22 was impossible for you to get an answer by June of 1975, when
23 the original Exhibit number 15 was prepared?

24 A I believe that our thinking at the time was that we had the
25 impact analysis from the Department of Natural Resources at
26 the end of January or first of February, and that the hearings
27 were scheduled to start early in March and then they were de-
28 layed and, as I recall, we were assuming that the whole thing

1 would take from six weeks to two months. Obviously, our
2 thinking was in gross error.

3 Q Well, that may have been your thinking before the commence-
4 ment of the hearing in Bozeman in March of 1975, but when
5 this exhibit was tendered to us two months later in May of
6 1975, by that time you knew that a June 1975 date for re-
7 start of engineering, placing major orders, and releasing
8 delays was impossible, isn't that true?

9 A Well, I think that releasing delays on major orders wasn't --
10 we could have done that without the board acting and giving
11 us a permit to go ahead and construct. This was just gam-
12 bling more money that we would get a favorable response; and
13 in May, we still thought that if the hearing was going well
14 and proceeding rapidly that it might be worthwhile in June
15 to go ahead and release orders so that we could start con-
16 struction and not abandon our 1979 date for unit 3 being on
17 the line.

18 Q And you, in fact, took that gamble last month and re-started
19 engineering?

20 A Only on a very limited basis; we haven't authorized any ven-
21 dors to re-start engineering where it will accumulate costs
22 as far as we're concerned.

23 Q In January of this year, that is to say this month, you are
24 prepared to release delays on major orders, if you haven't
25 done so already?

26 A No, not to the extent that we will accumulate any substantial
27 costs; there may be some minor things, for instance in the
28 scrubber area or something like that where a manufacturer,

1 in order to stay on schedule, would need to expend some en-
2 gineering effort, and on an item by item basis we might
3 choose to do this.

4 Q Have you or have you not yet released delays on major orders?

5 A No, not to allow them to start manufacturing.

6 Q Do you intend to release delays on major orders this month?

7 A Well, no.

8 Q Then why do you have release delays and place major orders
9 scheduled for January of 1976?

10 A Well, we are dealing with semantics here and perhaps these
11 are an unfortunate choice of words. We are not preventing
12 Bechtel from placing more orders; we are going to make the
13 decision ourselves on each order that is placed; but what
14 I am trying to say is that we are not going to place any or-
15 ders on the basis of it costing us additional dollars to do
16 this. We may place orders on the basis of selecting shop
17 space with the agreement that costs are not accumulated if
18 the project is cancelled within the next month or two, or some-
19 thing of this nature.

20 Q Does Bechtel still believe that the schedule is tight?

21 A For a 1980 construction, if we can proceed with engineering
22 on a full scale basis soon, no; I think we're on a good
23 schedule.

24 Q I asked you what Bechtel was thinking.

25 A I believe they think we are, too. Of course, they like to
26 have as much time as possible; they'd rather start sooner.

27 Q Now you keep referring to whether or not you're going to incur
28 more costs; of course, that's set forth in Exhibit number 17-A

1 that you've prepared for this hearing, is it not?

2 A That is correct.

3 Q Would you look at that?

4 A Yes, all right.

5 Q The original Exhibit 17-A has now been revised. The original
6 Exhibit 17-A was dated March 4, 1975, and the current Exhibit
7 17-A is dated January 6, 1976.

8 A That's correct.

9 Q Now when you referred to additional costs, you do schedule,
10 as I read it, some fifteen thousand dollars to be incurred
11 in the month of January, 1976, on transmission, and some
12 one hundred twenty-eight thousand dollars in costs to be in-
13 curred in the month of January, 1976, on generation, isn't
14 that right?

15 A I'm having trouble following you relative to this form.

16 Q The form says, looking at the revised Exhibit 17-A, the form
17 says that up to January 1, 1976, you will have spent seven
18 million eight hundred thirty-two thousand dollars on genera-
19 tion and, a month later, February 1, 1976, seven million
20 nine hundred sixty thousand dollars or an increase of one
21 hundred twenty-eight thousand dollars.

22 A Okay, I'm with you.

23 Q Now, if you look at the breakdown above, that total for genera-
24 tion, that's line item 1.6, the breakdown above shows those
25 expenses are incurred on Bechtel engineering and home office
26 costs and on contract fees and on Montana Power Company and
27 other client costs?

28 A That's right.

1 Q What are those additional Bechtel engineering and home office
2 fees and contract fees and Montana Power Company and other
3 client costs?

4 A The Bechtel engineering and home office is the re-start of
5 engineering that we authorized in November on a limited basis.
6 The contract is the Bechtel contract and the fee part of it
7 is going on all the time; we are paying it off so much a
8 month.

9 Q Six thousand dollars, as a matter of fact, for contract fees
10 in the month of January, right?

11 A No, the difference between one million four hundred seventy-
12 seven and one million three hundred ninety-six, I believe.

13 Q Excuse me; yes, for contract fees you show in the month of
14 January some fifty one thousand dollars. It's for Montana
15 Power Company and other client costs that you have six thou-
16 sand dollars for that month?

17 A That's right.

18 Q What are the Montana Power Company and other client costs of
19 six thousand this month?

20 A Well, this is just engineering effort that we are putting in
21 on units 3 and 4 to try to get the engineering and procurement
22 back on track in order to meet the 1980 schedule.

23 Q And for generation, as I see line 1.5, you have no additional
24 costs for pre-payment and delay charges scheduled at any time
25 through May of this year, right?

26 A Yes, these are payments that we've already made.

27 Q Okay.

28 A Until we re-schedule, and then if we re-schedule and then we

1 cancelled again, we would accumulate more pre-payment and
2 delay charges; we do have cancellation charges which we'll
3 also have to face if the project doesn't go, of course.

4 Q As far as the one hundred twenty-eight thousand dollar total
5 is concerned for the month of January, 1976, and indeed, if
6 you run from January 1, 1976, to the end of your schedule,
7 May of 1976, where the total is something less than a million
8 dollars?

9 A For that item, yes.

10 Q Yes, for the line item 1.6?

11 A Yes.

12 Q All of those costs are voluntarily incurred by your decision
13 to continue generation engineering, isn't that correct?

14 A In an effort to meet the 1980 schedule.

15 Q All right, sir. Now, if we look at the next category, the
16 transmission, the increases are substantially smaller there
17 than they are on generation, only six thousand dollars in
18 total for the month of December, 1975, fifteen thousand dol-
19 lars in total for the month of January, 1976, then twenty
20 thousand dollars for the next month, twenty-five thousand
21 dollars for the next month, and thirty thousand dollars for
22 the month after that--that's in total?

23 A Yes.

24 Q Now, I take it that each of those costs also flows as a result
25 of your decision to continue engineering?

26 A Yes, it's not necessary to put as much effort into transmission
27 because the time schedule on the transmission is not as tight
28 as it is on the generation.

1 Q Okay. Your next category is entitled "Environmental," and
2 you have two sub-categories, one generation and the other
3 transmission. Now, under generation you have a footnote re-
4 ferring to Westinghouse costs, McKay coal testing, meteorolo-
5 gical costs, and a note that a portion of the Westinghouse
6 costs is presented under transmission. As of November 1,
7 1975, that total was one million three hundred twenty-six
8 thousand dollars; when you run it out over the next six
9 months, it amounts to about twenty-five hundred dollars a
10 month more or fifteen thousand dollars in total from the
11 beginning to the end of that period. What are you spending
12 fifteen thousand dollars on over that six month period?

13 A As I recall, we still have some meteorological work continuing.

14 Q That's under your contracts with Montana State University?

15 A I believe so, yes.

16 Q Okay. Now the next category is entitled "Legal," where you
17 have three sub-categories, generation, transmission and
18 common. Does that have to do with contract work in connec-
19 tion with the various prime and sub-contractors that you're
20 working with on your engineering?

21 A Some of it would.

22 Q What would be the other legal expenses you are incurring that
23 you project from November 1, 1975, to May of 1976, fifteen
24 thousand dollars all together?

25 Q This month we had several meetings in San Francisco firming
26 up some of the Bechtel contract administration provisions and
27 there were legal people involved; there is a little of that
28 going on all the time.

1 Q Those are Montana Power Company lawyers you are talking about?

2 A Yes, there were also some Puget Power lawyers involved as I

3 recall.

4 Q Those costs, therefore, have to do with the policing, moni-

5 toring or shepherding of your continuing engineering which we

6 previously discussed?

7 A I think it's more in terms of the general contract with

8 Bechtel and the fact that we had some fine print that needed

9 working out in the administration of it.

10 Q And that comes as a result of your doing further engineering

11 with Bechtel?

12 A No, I think it comes as a result of just the fact that we

13 hadn't gotten around to finishing it up.

14 Q Oh, you hadn't done it before?

15 A That's right.

16 Q Okay. Then we have an item called hearing costs on the cur-

17 rent Exhibit 17-A, that's line item 5.0; on the old Exhibit

18 17-A, that was line item 6.0. The total of hearing costs as

19 of November 1, 1975, was five hundred five thousand dollars.

20 As of September 1, 1975, according to the old Exhibit 17-A,

21 there was a total of three hundred thousand dollars which

22 had remained constant from June of 1975. Do you not allocate

23 the time expended by employees of the Montana Power Company,

24 the expenses incurred for witnesses who have attended these

25 hearings, and other legal and other attendant expenses for

26 these hearings as hearing costs?

27 A Yes.

28 Q Then why is there no indication of any hearing costs from

1 June 1, 1975, through September 1, 1975, on the original
2 Exhibit 17-A?

3 A I think the original exhibit was an estimate that was made
4 up before the hearings progressed. I don't even have that
5 original exhibit in front of me, but as I recall, that ex-
6 hibit went in prior to that point in time, assuming that the
7 hearings would be over.

8 Q Your contemplation now, I take it, is that from November 1,
9 1975, to May 1, 1976, you will be spending three hundred
10 ninety thousand dollars on hearing costs?

11 A That's right.

12 Q Now a relatively small portion of those hearing costs come
13 from Bechtel; five thousand dollars in November of '75, five
14 thousand dollars for each month thereafter through May 1, 1976.
15 What is Bechtel doing for this hearing now?

16 A This is just a number that was put in because from time to
17 time we need to get Bechtel's help to check some particular
18 item that we are going to use in the hearing; it's based on
19 past performance, we assume that we will still spend something
20 like five thousand dollars a month in that direction.

21 Q If you will go down to the next line item, I wanted to ask you
22 about 7.0, that's cancellation charges. You have that listed
23 as three million nine hundred fifty thousand dollars and re-
24 mains constant from November 1, 1975, through May 1, 1976.
25 Your cancellation charges, line item 7.0, were called cancel-
26 lation costs on the original Exhibit 17-A and they were sub-
27 stantially greater?

28 A Okay.

1 Q You see where 7.0 line item was previously at five million
2 two hundred sixteen thousand dollars in May of 1975, and then
3 went up four hundred fifteen thousand dollars the next month;
4 it went up practically one million one hundred thousand dol-
5 lars the next month; it went up eight hundred five thousand
6 dollars the next month; and went up over two million dollars
7 until September of 1975?

8 A Yes.

9 Q And the total cancellation charges as of September 1, 1975,
10 cancellation costs I should say, was nine million six hundred
11 twenty thousand dollars. Clearly, since it's down to three
12 million nine hundred fifty thousand dollars, two months later,
13 there must have been some shuffling of accounts. Can you ex-
14 plain that for us?

15 A Yes, we worked very hard since the original exhibit went in
16 with the vendors to try to reduce our exposure on cancellation
17 charges and, we might even say inadvertently, in the boiler
18 area we have reduced them substantially, but in the course
19 of doing it the cost of the boiler has gone up fifteen million
20 dollars. The reason for that is that we had the boiler manu-
21 facturer tied into a contract; it was tied to prices back in
22 late 1973, and his estimate of escalation at that time -- we
23 had an option to go either that way or with a phone price at
24 that point in time and indices for escalation. We took the
25 price with the escalation in it and, as it exists today, it
26 was fifteen million dollars cheaper than the other option.
27 But now that the project has been delayed, the vendor is
28 backing off of his claims for cancellation charges but he is

1 going to the escalation provisions, and with the delay that
2 has occurred, there is no way for us to defend ourselves
3 against it; so it appears that we are probably out fifteen
4 million dollars, but it has reduced the cancellation charges.

5 Q From time to time, Mr. Labrie, before this Board of Natural
6 Resources in procedural discussions and before the Board of
7 Health and Environmental Sciences during the hearing, there
8 have been references made by representatives of the appli-
9 cants to increase the costs by five or six million dollars
10 a month. Do you know of any basis for that?

11 A If you assume that the rate of escalation is going to be
12 about 7 percent for the two year delay, this amounts to
13 in excess of ninety-four million dollars. That's the most
14 recent number that I would go with; whatever ninety-four
15 divided by twelve is, would be an estimate of the cost per
16 month.

17 Q That's inflation, isn't it?

18 A Pardon me?

19 Q You're dealing with inflation there, aren't you?

20 A Yes.

21 Q But as far as the cancellation charges are concerned, your
22 current Exhibit number 17-A shows what you presently contem-
23 plate to be the case?

24 A That's right.

25 Q And that's no increase since November 1, 1975?

26 A No, because we are in a status quo with the vendors until we
27 actually settle these things and many of them are a matter of
28 negotiation.

1 Q As a result of the success you have had in re-working your
2 cancellation charges or costs, your total costs, including
3 cancellation charges, have substantially decreased, haven't
4 they? Oh, I took that exhibit away from you.

5 (Witness given document.)

6 A Yes.

7 Q As of September 1, 1975, your total costs were projected to
8 be twenty-four million seven hundred twenty-four thousand
9 dollars. Two months later you've reduced that by almost
10 five million dollars?

11 A Yes, although as I mentioned, the cost of the plant, conse-
12 quently, has gone up about fifteen million.

13 Q Aside from the inflationary pressures on the cost of the
14 plant, should you decide to go ahead with it, however, it is
15 clear that between November 1, 1975, and May 1, 1976, the
16 total additional expenditures comes to something less, well
17 it comes to exactly two million fifteen thousand dollars?

18 A That's correct; yes, that's correct.

19 Q No part of which is a cancellation charge?

20 A That's correct.

21 Q Do you recall, Mr. Labrie, the date on which the application
22 for this project was filed?

23 A It was in June of '73.

24 Q June 6, 1973, was it not, sir?

25 A Okay, that sounds right, yes.

26 Q And about two weeks later, you appeared before the board of
27 the Montana Power Company and you presented to them a document
28 which has now been marked as Exhibit number 17 for this pro-

1 ceeding?

2 A That is correct.

3 Q Is it the case that you never previously appeared before the
4 board of the Montana Power Company to present that same in-
5 formation to them?

6 A I don't recall whether I appeared before the board prior to
7 June in regard to units 3 and 4 or not, but the board was
8 given a good deal of information as the studies progressed.
9 The purpose of the presentation that I made in June was to
10 fill them in on a complete story at once and all the detail
11 and the justification for going with the project.

12 Q Well, that's interesting that you appeared before the board
13 at the Montana Power Company two weeks after the application
14 was filed. The material which you submitted to them was
15 prepared by Rob Stuart the day before you appeared before the
16 board, isn't that right?

17 A Well, in its final form, yes.

18 Q Yes, June 18, 1973?

19 A Yes, the study had been progressing for a good deal of time,
20 but we put it in this form in order to make it easily under-
21 standable by the board.

22 Q One of the pieces of paper that you put before the board was in
23 rather large print; do they have bad eyes over there?

24 A No, I was using an overhead projector and this is prints of
25 the exhibits.

26 Q I think it's called page 7 on Exhibit number 17 now?

27 A Seventeen revised.

28 Q Yes.

1 A Incidentally, the reason for the revision was that the pre-
2 vious exhibit, 17, was just what you extracted from our files
3 and it had a lot of stuff in there that would be somewhat con-
4 fusing so we re-organized it and put it in this time so that
5 this board can follow it a little more clearly.

6 Q Yes, the previous exhibit was entitled, "Subject: Criteria
7 used for Economic Study Number 4."

8 A Well, that happened to be there, the front page of the stuff
9 that was stapled together and given to you.

10 Q Right. That was the study that had been prepared by Dick
11 Davenport and Rob Stuart together?

12 A Right. These people were working on that project, that's
13 correct.

14 Q In any event, page 7 of the current revision of Exhibit num-
15 ber 17, also had appeared in the last edition of Exhibit num-
16 ber 17 and it's labeled, "Sensitivity, Levelized Annual Costs."
17 What does that mean?

18 A We were in our basic study to compare the alternative of de-
19 veloping generation by ourselves or going into this joint
20 ownership agreement for two 700 megawatt units, on the basis
21 of our participating at the level of 30 percent, which is what
22 was being talked about at the time. But we also made a study
23 of our participation at a level of 25 percent and 35 percent,
24 and compared both of them against single ownership by us to
25 make sure that cost-wise it would not change the results and
26 that it still indicated that we should go with units 3 and 4.

27 Q The term sensitivity I don't quite understand in connection with
28 this exhibit, Mr. Labrie. Were you having a sensitivity

1 training session for the board?

2 A No, I guess that's an expression that we've coined ourselves,
3 but we are looking at the sensitivity of the assumption 30
4 percent and would changing it to 25 percent materially change
5 the results of the study or wouldn't it; the same, as you will
6 see on the sheet, why we looked at the sensitivity of what
7 escalation rate we had assumed in the study and we looked at
8 the sensitivity of our surplus sales assumptions in the study.
9 These were the parameters that we were most concerned -- all
10 of them are judgments and we were most concerned that we
11 didn't want to be picking a number that distorted the answer.

12 Q As long as you're bringing up the last category that is on
13 that page, surplus sales, I am interested in that. It's got
14 two references, no sales and 50 percent sales, is that right?

15 A That is correct.

16 Q And it has two columns, single and joint; I assume single and
17 joint referred to the ownership of the project?

18 A That is correct.

19 Q What does it mean to say no sales under single ownership,
20 forty-four million nine hundred ninety-three thousand dollars?

21 A It means that if we assume that there was no market for the
22 surpluses from the plants that were proposed in the single
23 ownership plan, that the levelized annual cost of operating
24 under that plan would be forty-four million nine hundred
25 ninety-three thousand dollars.

26 Q It means you would have to eat that much power cause you
27 couldn't sell it?

28 A No, I mean that the annual revenue requirement to support

1 that plan on a levelized basis would be that amount, not
2 giving any credit to any sales. We treated both the single
3 and the joint with the same assumptions to see if that would
4 change the results, and in all cases it favors the participa-
5 tion in Colstrip 3 and 4; the joint ownership plan is our
6 least cost alternative.

7 Q The difference between single ownership and joint ownership
8 on the assumption that you won't sell any of your surplus
9 power is some 3.7 million dollars here?

10 A That's right, that's the most conservative assumption we can
11 make, obviously, is that we can sell no power.

12 Q And I take it that means that if you are unable to sell any
13 of the surplus power that you will have from Colstrip units
14 3 and 4, whether you own the units by yourself or in joint
15 ownership with others, the revenues you will need to obtain
16 outside of surplus sales, 'cause those are zero, would have to
17 be almost forty-five million dollars in order to service those
18 units, is that right?

19 A I think the only thing that I would have trouble with in the
20 way that you've phrased that is that the two plans we are con-
21 sidering are one where we would develop 350 megawatt units
22 on our own versus Colstrip units; otherwise that statement is
23 correct.

24 Q Right. I'm glad you brought that up, Mr. Labrie, because I
25 did not state that as an explicate assumption, but you know
26 and I know that the comparisons that were made for the benefit
27 of the board for the Montana Power Company were the considera-
28 tion of Colstrip units 3 and 4 and it is proposed today on

1 joint ownership or the possibility of building a single 350
2 megawatt nominal rating for a plant wholly owned by the Mon-
3 tana Power Company?

4 A Or a series of them; you have to have the same amount of gen-
5 eration over the life of the two plants.

6 Q Sure. But that you do in terms of time scheduling?

7 A Pardon me?

8 Q You do that in terms of time scheduling?

9 A Of time scheduling?

10 Q Yes; you said there would be a series of 350 megawatt units.
11 For example, you didn't mean they'd all come on at the same
12 time?

13 A No, page 1 shows the proposal. In 1968, under the single
14 ownership plan, we have a 100 megawatt gas turbine, in '79
15 a 350 megawatt coal-fired unit, and in '85 a 350 megawatt
16 coal-fired unit. When we compare that against the joint
17 ownership plan, in '78 we'd have 30 percent of a 700 megawatt
18 unit, in '79 30 percent of a 700 megawatt unit and in '85 a
19 100 megawatt gas turbine, and in '86 40 percent of a 700 mega-
20 watt unit. The only reason for showing the 40 percent of the
21 700 megawatt unit in '86 is so that the two plans, over the
22 life of the study, will have the identical same amount of
23 generation so that you can compare the annual costs for both
24 of them to see which is higher.

25 Q That 700 megawatt unit for 1986, if it were built at Colstrip,
26 of course, would be Colstrip 5, wouldn't it?

27 A If that were to develop. This is by no means a suggestion
28 that we build a Colstrip 5.

1 Q It was just a comparison that you had to make for your study?

2 A Right. In order to make a comparison at all you have to have
3 the same amount of generation.

4 Q And you also had, of course, a 100 megawatt gas turbine pro-
5 jected on the one hand in 1978 and in the other, the joint
6 ownership, 1985?

7 A That is correct.

8 Q How are you coming with your plans for a gas turbine?

9 A We haven't pursued them at this point in time.

10 Q By the way, another way of talking about escalation sensitivity
11 in your costs for the various studies is inflation, isn't it?

12 A I tend to use the word inflation and escalation synonymously,
13 yes.

14 Q Good. Have you made any firm or not so firm plans for the
15 sale of surplus power from any of the Colstrip units yet?

16 A From 3 and 4?

17 Q I said any but you can start with 3 and 4 if you prefer.

18 A No, we are waiting until we know if 3 and 4 are going or not
19 and, if so, in what time frame.

20 Q How about Colstrip units 1 and 2?

21 A We have been negotiating some trades back and forth but, I'm
22 not up to date on it at this point in time -- I can't tell
23 you.

24 Q Were you here, Mr. Labrie, when Mr. O'Connor testified in the
25 early stages of this proceeding?

26 A Yes, I was.

27 Q Do you know what he was talking about when he referred to
28 plans in the engineering department of the Montana Power

1 Company providing for the sale of surplus power out of Col-
2 strip 3 and 4?

3 A I don't recall the context that he was talking in at this
4 time, no. I know that we expect to sell the surplus from
5 Colstrip 3 and 4 until we need it; there is a deficiency in
6 the Pacific northwest and so there is a market for it.

7 Q We might be accused of having led him down the primrose path,
8 Mr. O'Connor when he was testifying, but the question and
9 answer went sort of like this.

10 (Off record briefly)

11 Q Volume 2, page 354. Mr. Labrie, the question I wanted you to
12 take a look at is at line 21; I've already gone over it with
13 you while Mr. Bellingham was out of the room. Mr. O'Connor
14 was asked if he was aware that plans within the engineering
15 department included provisions for sale of surplus power out
16 of the Colstrip units. His answer was, "Why certainly." If
17 he was all that certain about it, that's why I wanted to ask
18 you what plans there were, and I take it that your answer now
19 is that you don't know of any other than what you've described?

20 A Well, we fully expect to market the power and I'm sure we've
21 had many conversations in the past about the deficiency in the
22 Pacific northwest and the fact that there will be a ready mar-
23 ket for this. Incidentally, we did not, in our economic
24 study, choose to assume full surplus sales because we wanted
25 to be absolutely certain that there wasn't any basis upon
26 which single ownership would be more economic than joint.

27 Q Well, as Mr. O'Connor would say, "Why certainly"?

28 A That's right.

1 Q I asked you a few minutes ago, Mr. Labrie, about the gas
2 turbine plan that you had in comparison of the joint owner-
3 ship for 1985 or 1986. You refer to that again in your
4 statement, that's on page 14 of your statement for this hear-
5 ing at line 23, when you say that in your study of the plans
6 you realized, or recognized -- this would be back in 1973 that
7 you recognized -- that the decision as to what generation was
8 to be built in 1985 or 1986 would be made upon the alterna-
9 tives that existed at that time, that time being in 1985 or
10 1986?

11 A Well, in time to develop these alternatives.

12 Q Sure. Do you still believe that is the case?

13 A Yes.

14 Q Now in the proposal that you made to the board of the Mon-
15 tana Power Company, or the description of the background of
16 an application that had already been filed -- Exhibit number
17 17 -- you don't there refer to the consideration of the
18 minimum adverse environmental impact, do you?

19 A You mean in my presentation to the board?

20 Q Yes, sir.

21 A I can't specifically recall what I said.

22 Q Let me ask you about lead time, Mr. Labrie. As I take it,
23 the general time period in which we are looking at the de-
24 cision making process to proceed with Colstrip units 1, 2, 3,
25 and 4, is the period 1970 to 1972, is that a fair statement?

26 A For units 1 and 2, yes.

27 Q Well, units 3 and 4 got into the discussion stage rather
28 heavy by 1972?

1 A As I recall, the four company presidents agreed to a joint
2 feasibility study in August of '72, and a task force was
3 created after that time which worked on it and I believe that
4 a part of that task force was in November or December of '72.
5 That was overall joint feasibility and then the individual
6 companies had to do their own studies beyond that.

7 Q But the discussions, of course, had to precede the agreement
8 made by the numbers of companies in August of 1972?

9 A There were numerous discussions about possibilities prior to
10 that time.

11 Q I think it was in 1971 that we first started to see some of
12 those computerized studies that Dick Davenport was turning
13 out from the planning department; it would run through various
14 alternatives of numbers of Colstrip units and what the cost
15 would be for transmission or otherwise. Does that stick in
16 your mind about right, the dates?

17 A Let's see. I know there were some studies in '71; what I
18 can't tell you is whether they were related to the 3 and 4
19 proposal that later evolved.

20 Q If you take 1971 as the year in which you began your site
21 studies --

22 A For what, 3 and 4 or 1 and 2?

23 Q For the whole complex, 1, 2, 3, and 4, that we are looking at
24 now.

25 A Oh, they began before that.

26 Q Do you want to start earlier than that, in 1970?

27 A The site studies that we did to determine the Colstrip site
28 were begun in January 1970.

1 Q January 1970?

2 A Yes.

3 Q All right, let's take that period, January 1970. If at that
4 time you had commenced the entire process leading up to
5 Colstrip 1, 2, 3, and 4, rather than waiting until June of
6 1973, to commence the Colstrip 3 and 4 part of the process,
7 you would have met your 1978 original date for all those
8 units, wouldn't you?

9 A If at that point in time there was a determination to go
10 ahead with 3 and 4, yes; but that wasn't the case.

11 Q And if in June of 1973, instead of having the joint applica-
12 tion for the filing which did occur, 1400 megawatts at Col-
13 strip units 3 and 4, you had applied for a third 350 megawatt
14 unit; that is the other alternative that you described to the
15 board in June of 1973 after you had filed your application.
16 Is it not your best judgment, Mr. Labrie, that that 350 mega-
17 watt unit could still have been on line by 1979?

18 A Well, the Siting Act was in effect; I assume we would have had
19 to go through the same process we're going through. Inciden-
20 tally, the decision by the companies to go with 3 and 4 was
21 based on the cancellation of some nuclear projects at that
22 time. So, in 1971, the problem didn't exist.

23 Q And in 1971 there was no Siting Act in Montana?

24 A That's right.

25 Q Companies sort of respond to whatever ox is goring the least,
26 is that it?

27 A Well, we couldn't respond to the Siting Act before it existed,
28 that's for sure.

1 Q Sure; and if people in other jurisdictions were pressuring
2 companies not to proceed for one reason or another, nuclear
3 safety or whatever their concerns were at that time, that
4 wasn't the Montana problem then, was it?

5 A As I recall, the city of Eugene, Oregon, voted down a bond
6 issue that would have put a nuclear unit in on time and this
7 created a deficiency.

8 Q The Bechtel 1964 System Study, of which you have had some
9 discussion with Mr. Hofacker and which you now offer as an
10 exhibit in this proceeding, Mr. Labrie, that doesn't address
11 itself to environmental problems, does it?

12 A I don't think so. In 1964 I don't think there was even a
13 federal air quality control law at that point in time.

14 Q Well, it happens there was but that is neither here nor there
15 for purposes of our discussion at the moment, I suppose.

16 A Well, I'm sure there wasn't any state legislation.

17 Q Mr. Hofacker is on record, of course, of pointing out the
18 consistency of the position of the Montana Power Company al-
19 ways having had the high level of concern for the environment;
20 that's something you agree with too, isn't it?

21 A I sure do.

22 Q In that 1964 study by Bechtel, did they describe the projected
23 needs of the Montana Power Company based upon price elasticity?

24 A No.

25 Q That's a fairly new concept for people to look at in the
26 utility industry, isn't it?

27 A Well, back in 1964 things were pretty stable economically so
28 the necessity for anything like this didn't exist as I recall.

1 Q Your general conclusion from the Bechtel study was that
2 hydro facilities should be developed where they were eco-
3 nomically attractive to do so, but there weren't very many
4 that looked very economically attractive; would that be a
5 fair statement?

6 A I believe the recommendations in the '64 report said that we
7 should develop the Billings unit and then probably a second
8 Billings unit and that there were no hydro units that were
9 attractive to develop energy in place of that.

10 Q Of course, Bechtel was to be the contractor for the Corette
11 station, was it not?

12 A As it turned out they were.

13 Q Yes.

14 A They weren't at that point in time.

15 Q You personally have always had a close and friendly relation-
16 ship with the representatives of Bechtel, have you not?

17 A I try to; once in awhile we have a few wars, all right.

18 Q You, I think you expressed yourself in your absence at the
19 hearing before the Board of Health and Environmental Sciences
20 because we introduced a portion of your deposition into evi-
21 dence where you had expressed your dissatisfaction with some
22 of the engineering work that had been rendered by Bechtel on
23 the Colstrip units?

24 A That happens from time to time, certainly.

25 Q You wouldn't now be planning to build hydro facilities if they
26 weren't economically attractive, would you?

27 A I think the choice of what facilities to build probably re-
28 quires a broader view than just economics at the present time.

1 Q Well, for example, you currently have on your planning board
2 that you would like to build some hydro-electric facilities,
3 don't you?

4 A That's right.

5 Q And you'd only do that because, in fact, they are economically
6 attractive?

7 A Well, they would have to be economically attractive.

8 Q And the ones you have in mind, particularly, are at Buffalo
9 Rapids?

10 A Taking into account the other parameters of the problem.

11 Q The ones you have in mind now for planning purposes are at
12 Buffalo Rapids?

13 A That is correct.

14 Q As I understand it from your statement, Mr. Labrie, for pur-
15 poses in this proceeding, in any event, you presently believe
16 that the Buffalo Rapids units should be developed after the
17 development of Colstrip Units 3 and 4?

18 A I think that time wise they won't be developed before; the
19 hearings, permits, and agreements with the Indians and so on
20 can't come that fast.

21 Q Why don't we just reverse the procedure and have Buffalo
22 Rapids precede 3 and 4?

23 A We have been trying to build Buffalo Rapids since 1955, as
24 I recall and we haven't gotten a permit to build it yet. I
25 don't think that it makes good sense to plan it as an alterna-
26 tive when it will be very difficult to get any project built
27 in the time frame that we need to meet the deficiencies that
28 are required. Besides that, Buffalo Rapids only has 120 mega-

1 watts of energy involvement.

2 Q How many megawatts of energy are you going to need between
3 now and 1983?

4 A I don't recall; Roger testified to that.

5 Q Let's assume Buffalo Rapids would satisfy your energy needs
6 over the next eight or nine years, Mr. Labrie, for purposes
7 of our discussion; I don't quite understand why you allowed
8 the Buffalo Rapids application to be dismissed. Why didn't
9 you actively pursue that one?

10 A We are actively pursuing that.

11 Q Is the Federal Power Commission in the habit of dismissing
12 for inactivity applications which you are actively pursuing?

13 A I don't know what the Federal Power Commission is in the
14 habit of, but I don't blame them. The progress on pursuing
15 Buffalo Rapids has been very slow.

16 Q Specifically, it's taken you four years to answer the last
17 letter that's in the file from the Federal Power Commission
18 on the Buffalo Rapids project. Now that is a little slow
19 in answering a letter, isn't it?

20 A I don't even know anything about the letter; I know that with-
21 in the last two years I have been actively working on efforts
22 personally to develop the Buffalo Rapids project.

23 Q How have you been doing that?

24 A The Indians have a group of attorneys, and we have been meet-
25 ing with them to try to develop some relationship that will
26 promote this project.

27 Q Have you been meeting with Mr. Baenan and his colleagues from
28 Washington, D.C.?

1 A Yes.

2 Q Have you been meeting with them out here in Montana from time
3 to time?

4 A Yes, I haven't been in on all the meetings by any means, but
5 I have met with him when costs were involved.

6 Q Other than negotiating with the attorneys, what have you done
7 as an engineer to promote the Buffalo Rapids project?

8 A The area that I have been working in, as I testified in the
9 past, is in system planning and in the course of that, we
10 have done economic comparative studies of Buffalo Rapids
11 versus steam and tried to go over these with the Indians'
12 legal and engineering consultants to develop some area where
13 we can agree.

14 Q I know you've testified about this in the past in deposition,
15 Mr. Labrie, but those aren't part of the record in this pro-
16 ceeding so I'm going to have to ask you a little bit about
17 it. The record, for example, is silent on the fact that prior
18 to the experience you had on the Corette station, all of your
19 experience, practically speaking, has been on hydro generation,
20 that's true?

21 A Prior to Corette, I had no steam experience; I have been in the
22 engineering field for 26 years and I have worked in a number
23 of different areas.

24 Q In the Montana Power Company, your work was on hydro genera-
25 tion, wasn't it?

26 A And economic studies of hydro versus fossil versus nuclear.

27 Q That's why you went to Colorado to go to school in order to
28 learn more about thermo-powered power plants?

1 A That was part of my development in this area, yes.

2 Q In any event, with the rather substantial experience you had
3 in hydro generation for the Montana Power Company, you know
4 what it takes to do the engineering to proceed in the develop-
5 ment of a hydro project, don't you?

6 A I have some idea, yes.

7 Q And you also know, do you not, Mr. Labrie, that the Federal
8 Power Commission can give a permit to continue engineering
9 work in feasibility for a project on which an application is
10 filed by the power company or the utility without a joint
11 application having been filed with the land owner, in this
12 case the Indians; you know that, don't you?

13 A I presume so; I don't know very much about the Federal Power
14 Commission and how they act. You just gave a supposition and
15 I suppose you are right, I don't know.

16 Q You do know, do you not, that the Montana Power Company did
17 not file a separate application for the purpose of proceeding
18 on engineering feasibility with the Federal Power Commission?

19 A It seems to me that over the years, I think there have been
20 four different filings.

21 Q On Buffalo Rapids?

22 A Yes.

23 Q The current one that was dismissed for inactivity was a joint
24 filing between you and the Consolidated Salish-Kootenai Tribe,
25 was it not?

26 A That is right.

27 Q And that filing, in turn, was a result of negotiations that
28 you had had with the Indians on other filings since 1955?

1 A That's right, as far as I know.

2 Q Of course, in 1972 when the Federal Power Commission staff
3 representative wrote to Mr. O'Connor --

4 A In 1972 did you say?

5 Q Yes; and said to him in effect, "Hey, fellow, you haven't
6 been pursuing this one very actively; how about responding
7 to the information we've asked for?" Mr. O'Connor was then
8 in a position, of course, of knowing that this was a joint
9 application that had been filed with the Indians and he had
10 to get the Indians to go along with him to do anything more,
11 right?

12 A I don't know; I haven't seen the letter; I wasn't involved
13 in those negotiations; I really don't have any knowledge of
14 it.

15 Q Were you here when Mr. O'Connor was testifying about that?

16 A Yes.

17 Q You didn't disagree with his testimony then, did you?

18 A I don't even recall it, but my exposure to Buffalo Rapids has
19 been in the engineering feasibility of the project and in the
20 cost area and I can testify with some degree of expertise in
21 these areas, but as far as the relationship between the In-
22 dians and the Federal Power Commission and Montana Power,
23 I have very little knowledge

24 Q On the subject of nuclear power, I take it to be your view,
25 Mr. Labrie, that large nuclear plants, 1000 megawatts and more,
26 ought to be built near load centers, is that right?

27 A Or in an area where the transmission supports the plant.

28 Q Why is that?

1 A Well, because a 1000 megawatt plant -- when you loose it you
2 better have some place else to get the power and that's a
3 big chunk all at once; you've got to have pretty heavy trans-
4 mission around or it isn't a viable alternative.

5 Q Well, that's true of any plant, no matter where it's located;
6 if it's a large one, you've got to have some pretty good way
7 of making up for the loss when it goes out?

8 A That is correct.

9 Q Why particularly near load centers when you advocate the
10 building of a nuclear powered generating station?

11 A Generally speaking, it makes sense because you don't have
12 large amounts of fuel to haul, or very small quantities,
13 relatively speaking, so a nuclear plant is not site sensitive
14 in that respect at least; it's site sensitive from seismicity,
15 floods, and many other reasons so you can't always locate them
16 close to load centers, but if you've got a good site, a load
17 center is a good place to put them.

18 Q You've told me that a load center may not be available for
19 seismicity or geologic or other reasons, but if those reasons
20 don't rule out the load center, it's still a good site. I
21 haven't heard positively why the load center is a better place
22 than the middle of the Mohavie Desert?

23 A Well, because you have less transmission involved to get the
24 power from the generation to the load.

25 Q Why is that a good thing?

26 A Transmission, obviously, is costly, just as hauling coal is
27 costly.

28 Q In addition to the cost of having to transmit power, whether

1 by wire, rail, truck or carrier of some kind, there are also
2 energy efficiencies, are there not?

3 A Yes.

4 Q You lose energy when you transmit it over long distances?

5 A That's right?

6 Q The longer the distance the more the loss?

7 A In general that's right.

8 Q Pardon me?

9 A In general that's right.

10 Q Therefore, that aspect of energy efficiency would apply not only
11 to nuclear units, but any other kind of power generating sta-
12 tion, wouldn't it?

13 A To some extent, if you isolate that parameter without con-
14 sidering anything else. In other words, if there is no power
15 displacement situation, it's more costly to transmit power a
16 long distance than it is a short, and there are more losses
17 for a long distance transmission, if it's a radio transmission,
18 than short.

19 MR. SHENKER: I am about to go into solar energy,
20 Mr. Davis. I see the sun is shining outside; maybe we
21 should take an energy break?

22 HEARINGS EXAMINER: I'm sure everyone will agree
23 to that. Any objections, Mr. Bellingham?

24 MR. BELLINGHAM: Not at this time.

25 HEARINGS EXAMINER: We will take a brief recess.

26
27 (BRIEF RECESS AT 10:27 A.M.)
28

1 The hearing was reconvened following a brief recess, at 10:50
2 A.M.

3 HEARING EXAMINER: We will proceed.

4 CONTINUATION OF EXAMINATION OF ROBERT LABRIE

5 Cross, by Department of Natural Resources and Conservation

6 By Mr. Shenker (continuing):

7 Q Your statement, Mr. Labrie, talks of some alternatives that
8 might be considered. You pretty quickly pooh-pooh them as
9 reasonable or viable alternatives from your perspective.
10 There are five of them, as I count them in your statement,
11 beginning at page 19. They are the alternatives of what you
12 call futuristic design, coal gasification, liquefaction,
13 solar power, geothermal power, magnetohydrodynamics, and wind
14 power. When did the Montana Power Company make any economic
15 analysis of the use of any of those alternatives for generat-
16 ing power for its load?

17 A Well, first of all, I didn't pooh-pooh them. I think that
18 some of these will develop in the future, or at least, I
19 certainly hope they will, into viable sources of generation,
20 and the only thing I did say was that in this time frame,
21 there's just no possibility of developing any of these.
22 Montana Power and coal gasification, was involved with Chemi-
23 co and Union Carbide on a possible power plant down in the
24 Billings area several years ago and did some economic work on
25 that, and I've been a member of the Edison Electric Institute
26 Prime Movers Committee, and on the fuel and ash subcommittee
27 of this, we periodically reviewed the solvent refined coal
28 pilot plant progress because it looked quite promising, and I

1 think it probably will be quite promising. Carlton Grimm,
2 in the last six months, has gone, as I recall, to Milwaukee
3 and Detroit, in working with Allis-Chalmers Company on their
4 proposed coal gasification plant, and we've done some work
5 on the economics of it and the possibilities for it, and he
6 also went to -- I believe it was Riverside, California -- on
7 another proposal, where the people came up and presented it
8 to us and then we went down there to evaluate it, so that
9 especially in the area of coal gasification, we are very
10 actively involved and attempting to stay current with any
11 development that might show some possibilities. Coal gasi-
12 fication for power, for electric power plants, as I visualize
13 it, is something that would be a substitute for a scrubber,
14 and I hope it will develop. There's an awful lot of work
15 being done in this area, and I think probably will, in the
16 next ten years.

17 Q Mr. Labrie, you're getting to know me so well that I think
18 you and I can engage in the exercise in which I tell you the
19 answer and I tell you the question. I think that's what you
20 just did, you answered the question that I'm going to ask you
21 some time, perhaps, so it's anticipatory on your part. I
22 appreciate that. It's useful information. The question I
23 asked you was, when did the Montana Power Company first per-
24 form an economic analysis to determine the use of coal gasi-
25 fication to service the Montana Power Company load?

26 A Did you say first perform?

27 Q Yes, when?

28 A And I don't remember. It's been several years ago, the one

1 that we've been most active on, but I've been in coal gasi-
2 fication sessions and looked at the economics of it for five
3 or six years.

4 Q There's general talk in the industry, is there not, as to the
5 push for coal gasification plants?

6 A I don't know quite what you mean by the word "push."

7 Q Acceleration of interest and effort.

8 A There's a lot of interest and effort and I think it will
9 accelerate. Incidentally, though, it's turning out at the
10 present time, more costly than we had hoped.

11 Q More costly?

12 A Yes.

13 Q Well, that seems to be sort of the law of life.

14 A Yes.

15 Q What's the result of coal gasification in terms of the end
16 product? What do you get after coal gasification?

17 A Well, there's a ten to one combined coal gasification, solvent
18 and refined coals and fluid ash bed and boilers, all in one
19 package, but there are a lot of different end products, but
20 generally speaking, you get a fuel from coal that you can
21 then treat, and instead of treating the whole volume of com-
22 bustion gases like you do in a scrubber, you have a smaller
23 volume that you're treating, so it ought to have some advan-
24 tages if we can ever get the breakthroughs we need to make it
25 practical.

26 Q What do you do with that fuel after you've gasified the coal?

27 A Well, you can either burn it in a normal gas-fired boiler or
28 you can use it in a combustion turbine or a combined cycle

1 that used a combustion turbine and a heat recovery boiler.

2 Q Like your Bird plant, for example?

3 A We were looking at just this proposition in the case of the
4 Union Carbide proposal, and what we had in mind was putting
5 in a combustion turbine and firing it with gasified coal and
6 then exhausting it into the Bird plant boiler.

7 Q Well, Mr. Labrie, this futuristic concept of coal gasifica-
8 tion, as you describe it, has some impact on energy conver-
9 sion efficiencies, doesn't it?

10 A Well, there's certainly some energy losses and relative ener-
11 gy differences between one system and another.

12 Q Generally speaking, is the coal gasification process, whether
13 in combined cycle or in two stages, a more or less thermally
14 efficient system, than not having gasified the coal in the
15 first instance?

16 A A combined cycle process would generally be more thermally
17 efficient than a boiler, especially if they developed the
18 high temperature bladings that the industry is working on for
19 gas turbines, but the coal gasification process generally
20 will have a 15% to 20% loss in it by itself, so it isn't
21 necessarily more efficient than some other process.

22 Q The increasing of efficiencies in thermal energy conversion
23 are good things, aren't they?

24 A Very definitely.

25 Q Would you agree with Mr. O'Connor's statement when he testi-
26 fied here earlier that in the Montana Power Company you have
27 been giving attention to the science of coal gasification for
28 ten years prior to May of 1975?

1 A That's probably correct. I said it was probably correct. If
2 George O'Connor said it was correct, it probably is correct.
3 From my own recollection, I don't know if I can go ten years
4 back, but somewhere near that.

5 Q The memory of man is fallible, even from Mr. O'Connor?

6 A That's right.

7 Q If you want to disagree, feel free to do so. Did you attend
8 the meeting of the stockholders of the Montana Power Company
9 on June 19, 1974, when Mr. O'Connor made his swan song
10 speech as President of the company?

11 A I don't remember whether I did or not.

12 Q That was the speech in which he had the paragraph on coal
13 gasification in the future. Do you recall having heard the
14 speech?

15 A No. I very well may have heard it, but I don't recall.

16 Q Well, the fact is, that in the Montana Power Company, coal
17 gasification is a very real planning concept for the better
18 delivery of energy for your consumers, isn't it?

19 A The context that I've been answering your questions in is
20 coal gasification relative to the production of electric
21 power. Montana Power is also interested in coal gasification
22 as a substitute for natural gas.

23 Q Do you personally get into the natural gas supply end of the
24 Montana Power Company very much?

25 A No, I do not.

26 Q But you know, of course, that it's a major concern for the
27 company?

28 A That's correct.

1 Q How does this coal gasification business produce natural gas
2 that could be either a substitute for, or related to the
3 natural gas that heats homes and powers industries? How
4 does that happen?

5 A Well, again, there are many, many different processes, but
6 pipeline quality gas is what we call high Btu gas. It would
7 have about a thousand Btu per cubic foot, and the gas that's
8 produced more economically for short delivery, say, just for
9 a power plant, would be low Btu that might range from 150 to
10 350, and for high Btu gas, why, it takes hydrogen to form
11 methane, as I recall, and get the higher Btu.

12 Q You mean this coal gasification process can provide actual
13 high Btu natural gas that you use for heating houses?

14 A Well, it can if you provide the system to do that, yes. This
15 isn't what you would do for a power plant because it would be
16 too expensive.

17 Q There are some industries in Montana today that are fueled,
18 essentially, by natural gas, isn't that true?

19 A That's correct.

20 Q Would coal gasification provide them the natural gas fuel
21 that they use?

22 A Yes, it could. It's quite expensive at the present time.

23 Q Because we're at the pioneering stages of the technology
24 right now?

25 A Well, it doesn't look like it's going to be cheap under any
26 circumstance. It's an expensive process to convert coal into
27 high Btu gas.

28 Q Well, as a matter of fact, Mr. Labrie, one of the reasons

1 that the Montana Power Company filed for four times as much
2 water as it needed from the Yellowstone River was in order to
3 prepare for construction of a coal gasification plant?

4 That's true, isn't it?

5 A No.

6 Q You don't think that's true?

7 A No.

8 Q Did you hear Mr. O'Connor say that when he testified?

9 A I don't recall.

10 Q Would the fact that he said it make any difference to you?

11 A Well, I'm the guy that made the filing, and the basis upon
12 which I determined the maximum usage, which is the normal way
13 to make a filing, you only get the water that you perfect, of
14 course. The basis upon which to determine the maximum usage
15 was to determine the amount of coal that was there, and the
16 relative amount of water that might be required to make use
17 of that coal. Now, that could be done with coal gasification
18 or electric power, but all I did was to take a look at the
19 coal, and find out the arithmetic to make use of it some day.

20 Q You filed for 250 cubic feet per second?

21 A That's right.

22 Q You anticipate not more than 66 cubic feet per second for the
23 Colstrip project?

24 A That's correct.

25 Q You therefore filed for four times as much water as you need
26 for the Colstrip project?

27 A That's right. Since then, we've marketed much of that coal
28 elsewhere.

1 Q Did you not have in mind the desirability of gasifying coal
2 when you filed for four times as much water as you needed
3 for the Colstrip units?

4 A Well, the actual arithmetic that I did was based on power
5 plants. I'm sure that in the back of my mind was the idea
6 that what I should file for was enough water so that whatever
7 materialized out there, we would have a filing, and that cer-
8 tainly would include gasification as a possibility.

9 Q While I recognize, Mr. Labrie, that you have not had the day
10 by day concern over the plotting of loads and resources for
11 the Montana Power Company, surely with that department under
12 you, in your responsibilities, you would know, would you not,
13 whether the product of coal gasification has been taken into
14 consideration in the development of your load forecasts and
15 resources? You would know that, wouldn't you?

16 A Which load development resources? Are you talking about our
17 gas business or our electric business?

18 Q I was thinking of the electric business, but I'm glad you
19 mentioned gas, because I'll ask about that, too.

20 A You might not get any viable answers. Repeat the question.
21 I don't understand what you're asking.

22 Q Do you know whether, in the plotting of plans for load re-
23 sources and forecasts for the Montana Power Company, you have
24 taken into consideration the development of coal gasification?

25 A We have not in our load forecasts included the effect on our
26 electric load growth, due to the fact that the gas supply has
27 become very short and it may be necessary to convert to coal
28 gasification plants, which will make gas much more expensive

1 in that there will be a tendency to shift to greater electric
2 use, and this, personally, is a matter of concern that in the
3 long term, our load growth forecasts are probably too low.

4 Q The reasoning, I take it, is that with high prices of natural
5 gas, people would go to the lower price, electricity?

6 A That's right.

7 Q That's what they call cross-elasticity of demand, isn't it?

8 A That's correct.

9 Q And Mr. Hofacker has explained to us the extent to which you
10 consider cross-elasticity and price elasticity in the load
11 forecasting. Have you considered the effect upon the price
12 of the electrical power you produce as a result of the use
13 of coal gasification?

14 A Rather than burning coal directly in the boiler?

15 Q Yes, sir.

16 A No, we haven't, because at this point in time, coal gasifica-
17 tion, first of all, is not developed in the practical manner
18 that we would need for 1400 megawatt plants, but also, with
19 the current cost projections on coal gasification, the
20 scrubbers would be cheaper. Now, I don't mean to say that
21 coal gasification won't come into its own. I believe it very
22 well may in the next ten years.

23 Q And indeed, you would favor coal gasification and a develop-
24 ment of that kind, wouldn't you?

25 A Well, I don't know. Scrubbers will be a real high minus item,
26 but so would the refinery that you have to build to gasify
27 coal, so until there is a developed scheme, it's a little
28 hard to judge.

1 Q Well, you would want to develop the development of such a
2 scheme, wouldn't you, Mr. Labrie, in view of the higher
3 thermal conversion efficiencies which would be available?

4 A As I said before, I'm not satisfied that there are higher
5 thermal conversion efficiencies. I have hopes that there
6 will be, but for reasons that I've previously mentioned,
7 there very well may not be. We do encourage, and we do
8 support research and development in the coal gasification
9 area, most specifically.

10 Q One of the reasons that you encourage that research is to
11 pursue the higher thermal efficiency conversion available,
12 isn't that true?

13 A If there's high thermal efficiency available, we would certain-
14 ly wish to make use of it.

15 Q That's why you're researching it, isn't it?

16 A I think one of the reasons we're researching it is that it is
17 an alternative to flue gas scrubbing.

18 Q And another reason is that it's an alternative source for the
19 production of natural gas?

20 A Well, yes, for the gas company part of it. I think that one
21 of the things that's going to help coal gasification is, as I
22 mentioned before, which is a real important development, is
23 high temperature bladings on gas turbines so that you can get
24 high efficiency, and this isn't developed yet.

25 Q You're working on that one, too?

26 A Personally, I'm not working on it, of course not, but the
27 manufacturing industry, primarily, is working in this area.
28 The power company is supporting EPRI, which is financing many

1 of the coal gasification projects.

2 Q Aside from the five alternatives which you mentioned in your
3 testimony, as written and prepared for this hearing, are there
4 not other alternatives that could have been pursued?

5 A Well, let's see -- what I have mentioned is --

6 Q Coal gasification or liquefaction, solar power, geothermal
7 power, magnetohydrodynamics and wind power are the five that
8 you mentioned.

9 A Well, there's tidal power and there's the use of deep ocean
10 currents and the temperature difference between shallow
11 water and deep water in the ocean and there are numerous
12 schemes to produce hydrogen by electrolysis, and there are a
13 lot of what I choose to call futuristic alternatives that may
14 one day develop, and certainly, fusion.

15 Q Less imaginative concepts are also available, are they not,
16 Mr. Labrie?

17 A I don't know what you have in mind, Mr. Shenker. I mentioned
18 quite a few that occur to me at the moment.

19 Q How about something that's called system concentration?
20 Have you heard that term used?

21 A No.

22 Q And still, with thermo-generating units, coal-fired units,
23 indeed, there is the alternative of unit train, of hauling
24 to load centers? You haven't described that in your testimony.
25 I take it that that's an alternative that you know of and
26 that would have to be judged on its economic merits?

27 A Which was done in the case of units 3 and 4.

28 Q Done by others than you?

1 A Yes. I had some input, but generally speaking by others
2 than myself.

3 Q As of May 1975, Mr. Labrie, had the Montana Power Company
4 initiated any studies relative to coal gasification in Mon-
5 tana?

6 A I'm not sure that I'm familiar with all of the coal gasifica-
7 tion work that was done, but prior to May 1975, we were work-
8 ing with Union Carbide and Chemeco, yes.

9 Q Who initiated the project?

10 A Who initiated it?

11 Q Yes, sir.

12 A I don't recall. You mean, whether it was them or us that
13 proposed it, or what?

14 Q Yes, somebody, I suppose, initiated it?

15 A I believe that Mr. McElwain got in a conversation with the
16 President of Chemeco when the subject came up and he said,
17 would we be interested in pursuing that, and so we got to-
18 gether with their people and looked at it.

19 Q Do you disagree with Mr. O'Connor's statement when he testi-
20 fied in May of 1975 that as of that time the Montana Power
21 Company had not initiated any gasification studies?

22 A Yes, because I'm talking about a different type than he, than I
23 think he was probably talking about at the time.

24 Q He was talking about the production of natural gas?

25 A I imagine he was, yes.

26 Q And you're talking about for electrical power?

27 A That's right.

28 Q It is true, I take it, that as of May 1975, Montana Power

1 Company had not considered any gasification plants at any
2 specific locations?

3 A I suppose that's true, and if he said so, he would be closer
4 to that than I would.

5 Q That would be true of any kind of coal gasification plant,
6 wouldn't it?

7 A Oh, I think we were looking specifically at Billings.

8 Q How far had you got in your looking?

9 A We met back in New York City a couple of times and they met
10 here a couple times and we did some cost estimating and
11 visited with ERDA or somebody --

12 Q Visited with whom?

13 A ERDA -- and the Billings news media expressed real concern
14 over doing something of this nature, and the project dwindled
15 into benign neglect.

16 Q We should define our terms. ERDA refers to the United States
17 Energy Research and Development Administration?

18 A I believe that's who it was at the time, but I'm not sure.
19 It was some organization like that.

20 Q Since May of 1975, do you know whether, in the last eight
21 months, the Montana Power Company has initiated any further
22 studies with respect to gasification?

23 A Well, as I mentioned, part of Carlton Grimm's time is devoted
24 to following the field of coal gasification, and he has made
25 several trips and done some cost study work in this area,
26 and that's all, to my knowledge. There may be other work go-
27 ing on in the company that I don't know about.

28 Q Since May of 1975, do you know of any further consideration

1 of specific locations for coal gasification plants?

2 A I don't know.

3 Q In your statement, Mr. Labrie, you observed that according
4 to the Electric Power Research Institute -- that's the EPRI
5 to whom you referred earlier -- Montana Power Company is a
6 member of that institute, is it not?

7 A That's correct.

8 Q According to that institute, the first commercial unit for
9 coal gasification should be available by the middle of the
10 1980's?

11 A That's their prediction, yes.

12 Q Do you intend to be in on the development of the first com-
13 mercial units?

14 A We certainly haven't made any decision, after Units 3 and 4,
15 to go with the coal gasification plant for electric power
16 production at this point in time, no.

17 Q Do you know of any decisions made to go into coal gasifica-
18 tion for the production of pipeline natural gas?

19 A No, I don't. I know that we're working with the Governor and
20 the people that are doing the Glasgow study very closely.

21 Q Let's look at the next alternative that you described in your
22 study, Mr. Labrie, solar energy. The process of solar energy,
23 of course, has been utilized to heat homes. Is that true in
24 Montana?

25 A Yes, there are a number of installations that have gone in,
26 and some that are being planned at the present time.

27 Q How many?

28 A I can't tell you. I've run across several, one in Great Falls,

1 and one in Billings, as I recall, and one in Helena.

2 Q How many are being planned?

3 A How many are we planning?

4 Q Are being planned?

5 A Oh, I don't know.

6 Q How many are you planning?

7 A We're not planning any, to my knowledge, at the present time.

8 Q The technology for the utilization of solar power for heating
9 homes is available at this time, I take it?

10 A Somewhat. I'm sure that it's got a long way to go, but you
11 could put in any rather crude system to heat a home at this
12 time.

13 Q What is the Montana Power Company doing to promote the use of
14 solar energy for heating homes?

15 A I don't know that we're actively promoting solar energy. We
16 may be. I don't keep track of our marketing department that
17 closely. I think that a combination of heat pumps and solar
18 energy will become an attractive means of conserving energy
19 in the future, especially in the southwest, much more so than
20 here. In any event, I don't know that -- I think that we're
21 looking into heat pumps, all right and solar energy if you
22 put a storage device in with it, would meld into this, and
23 there is a project in Boulder, Colorado -- not Boulder --
24 in Colorado Springs, that is pursuing the research on this,
25 and I think it will develop.

26 Q You might call this home heating use of solar energy the de-
27 centralized production of electricity, wouldn't you?

28 A There are an awful lot of coined words nowadays, and that

1 sounds like one.

2 Q It's a useful term in terms of meaning, is it not, because
3 it is a decentralized process?

4 A Yes, that's right.

5 Q And the process is an attractive one, as well, from an energy
6 standpoint, is it not, because it utilizes otherwise waste
7 heat?

8 A Yes. At the present time, it isn't very economical. I think
9 you can spend more money insulating your house and conserving
10 energy this way than with solar energy, because it costs
11 about \$7500 a house on the numbers that I've seen on an aver-
12 age sized home, but I think that in the future, with the de-
13 velopment work that's going on with the heat pump, and so on,
14 it very well may become a good way to conserve energy, but
15 like I say, I'm not at all sure that it's going to be any
16 good for Montana.

17 Q Not enough sun?

18 A That's right.

19 Q How about in eastern Oregon?

20 A I don't know. I speculated on Montana because of our low de-
21 gree days.

22 Q To what extent, Mr. Labrie, has the potential for the use of
23 solar energy been taken into consideration in the preparation
24 of your load forecasts and resources?

25 A It hasn't been taken into consideration other than in a
26 generalized way, the same as the switch from natural gas to
27 electricity and many of the other things that can occur in
28 the future.

1 Q Are you familiar, Mr. Labrie, with the analysis of the overall
2 ERDA plan and program that came out this last winter, that is,
3 a couple of months ago, from the United States Congress Office
4 of Technology Assessment?

5 A From the what?

6 Q The United States Congress Office of Technology Assessment.

7 A Would you repeat the whole thing to me again, please? I
8 don't recognize it the first time through, but hit me again
9 on that.

10 Q An analysis of the ERDA plan and program by the United States
11 Congress Office of Technology Assessment?

12 A No, I don't think I've seen that.

13 Q Have you seen any critiques of the ERDA plan and program with
14 respect to solar energy in that the plan and program offered
15 by the United States Energy Research and Development Adminis-
16 tration inadequately emphasizes the utility of solar energy
17 production?

18 A You're going to have to repeat it, please.

19 Q Have you seen any critiques of the ERDA plan and program for
20 inadequately emphacizing the utility of solar energy produc-
21 tion?

22 A I am aware that there were critiques, so I must have seen
23 something at some time or another. There's a tremendous
24 volume of material in all of this research and development
25 field, and every college professor in the book thinks he's an
26 expert and writes a new thing that says we should be doing
27 something different from somebody else, so somewhere along
28 the line, I read something to the effect that there were some

1 people who were dissatisfied with ERDA's program.

2 Q The general thrust of the ERDA program with respect to solar
3 energy, of course, is to power generating stations, isn't it?

4 A I can't recall. I've read it, and I've read a whole pile of
5 stuff on solar, but I don't -- it's all mixed up together.
6 The stuff that I've used most recently comes from the Federal
7 Power Commission's National Power Survey and from EPRI. I
8 can't separate. I know that some of that has ERDA in it and
9 I can't separate the three in my mind at this point.

10 Q With respect to geothermal technology, turning next to that
11 third alternative which you mentioned, your prepared testi-
12 mony says that there are no known practical applications of
13 that resource in Montana at this time. Have you looked?

14 A The Montana Power Company has done some looking. I prepared,
15 or directed the preparation of an assessment of what the
16 world geothermal supplies look like and the ones that were in
17 operation and of the quality of the steam or -- the entropy
18 of the hot water that would be required to make it in the
19 area of being economically attractive, and our geological
20 people looked for possible sites at one point in time.

21 Q When did you prepare that study?

22 A Oh, 1970 or 1971, maybe. I'm just guessing.

23 Q Have you tried to update it since then?

24 A No, I don't think it would change. What I did was to do a
25 study of the geysers in California, the project in New Zealand,
26 the one in Mexico, and the one in Italy, and what uses they
27 were making of it and what Kaiser's proposed plans were, and
28 on the basis of that, determined that -- well, these people

1 are in it in a practical way and here's the type of geo-
2 thermal resource that they have found could be developed, so
3 you need something that's somewhere near in this ball park,
4 and when we find something like that, we'll make a specific
5 study to determine whether this one is practically develop-
6 able.

7 Q When you say that there are no known practical applications
8 in Montana, do you mean to imply that there are known appli-
9 cations outside of Montana?

10 A Yes, there are a number of them going on, I believe.

11 Q I'm always intrigued, Mr. Labrie, when you tell me about
12 studies that you've done that I haven't seen before, because
13 you always tell me that I've seen everything in your files.
14 Would you be kind enough to see if you can find that geo-
15 thermal study and produce it for me, please?

16 A I'll try to find it, but I have no idea of where it is right
17 now.

18 Q The next alternative, and last of the alternatives, which you
19 described, is in magnetohydrodynamics, sometimes described as
20 MHD. You describe that as a comparatively new technology
21 that appears to be more efficient than present technologies
22 as applied to combustion processes. What's the result of the
23 application of this technology?

24 A If MHD would be developed for coal-fired plants, it would en-
25 able us to generate steam at a higher temperature and this
26 would improve the efficiency by quite a bit.

27 Q How much?

28 A Oh, in the order of the first developments of the office of

1 Science and Technology task force, as I recall, estimated
2 55% and theoretically, it could go up to 60% from around 40%.
3 Now, this doesn't take into account the inefficiencies that we
4 get from scrubbers today, but it's a possibility.

5 Q In fact, an institute for development of magnetohydrodynamics
6 has opened in your home town in Butte, isn't that right?

7 A Correct.

8 Q And the Montana Power Company has some contact, I assume, has
9 it not, with the institute?

10 A Yes, we do.

11 Q Are you not involved in the work being done there?

12 A To some extent. I'm on the Electric Power Research Institute
13 working group on MHD in the Montana area.

14 Q Who is the director of that institute in Butte?

15 A Jerry Plunkett would be the manager.

16 Q Is it his view that the technology is 15 to 20 years away
17 from development?

18 A I don't know. I haven't discussed it with him.

19 Q Is there no one from the Montana Power Company who maintains
20 any closer contact with that institute in your home town?

21 A Yes, I believe -- you see, George O'Connor was on the Board of
22 Directors -- whether he's on there now, or Joe McElwain, I
23 don't know.

24 Q Have any of your people on the Board of Directors of the in-
25 stitute reported to you of the objectives, plans and programs
26 of the institute in terms of its time frame?

27 A Well, I follow them by being in meetings with these people.

28 I started in MHD back in about 1966, working with AVCO -- '66

1 or '67 -- somewhere in there, and went through their labora-
2 tories back in Boston, Massachusetts, and met with General
3 Electric and Westinghouse and tried to make an assessment of
4 the MHD program at that time because Montana Power was in-
5 terested in actively promoting something that would be useful
6 in coal areas, because we're in a state where we look like
7 we'll be in coal for a long period of time, and I worked with
8 the Edison Electric Institute people on that, and then, AVCO,
9 a number of times, almost periodically, since, had come out
10 here and they had met and gone over different economic plans,
11 and from there, I grew into working with the Electric Power
12 Research Institute along these same lines in kind of an ad-
13 visory capacity, and George O'Connor and Joe McElwain, I've
14 attended meeting with them at EPRI and so on, so I've stayed
15 reasonably knowledgeable about what MHD is doing, although
16 things have been happening fairly fast right now, and there's
17 more money being put in it now than was anticipated several
18 years ago.

19 Q Last year, Mr. Labrie, did you meet with any of the represen-
20 tatives of the Gilbert Associates and the Commonwealth
21 Associates when they were here in Montana to give their sta-
22 tus report on coal fueled advanced energy conversion systems?

23 A I think I was out of town for that meeting. I don't recall
24 having gone to it, and I remember I was going to go to it, and
25 I think I missed it.

26 Q Did some representatives of the Montana Power Company manage
27 to meet with those folks?

28 A I think so, but I can't recall precisely.

1 Q They discussed, of course, alternatives for producing electric-
2 ity from coal in an environmentally acceptable manner. Do
3 you remember that?

4 A It sounds reasonable.

5 Q And they described it in two different categories. One was
6 retrofit, and the other one was for new plants. Now, on
7 retrofit, there were the alternatives of direct combustion
8 using low sulfur coal, direct combustion with stack gas clean-
9 up and medium Btu gasification as boiler fuel?

10 A That's right.

11 Q Now, for the Colstrip units, you intend to make use of the
12 first two of those categories, but you're not talking about
13 retrofit, you're talking about new plants, isn't that right?

14 A That's right.

15 Q The medium Btu gasification of boiler fuel is something new
16 and just discussed this morning and you do not intend to
17 utilize it in the Colstrip units?

18 A If you put in scrubbers, you've defeated the purpose. The
19 Commonwealth Edison of Chicago is involved in a program of
20 just this type, and the reason they are is that they've got
21 a high Btu Illinois coal, and they had a program going last
22 year to try to develop an economic retrofit for coal gasifica-
23 tion called their Powerton Unit, and they shut it down because
24 it became too costly and it was apparent that it wasn't going
25 to be a viable alternative compared to the scrubbers in the
26 near future.

27 Q You mentioned that in your statement. The Commonwealth Edi-
28 son of Chicago, of course, is not the same thing as the

1 Commonwealth Associates of Jackson, Michigan, is it?

2 A No.

3 Q The latter is an engineering and consulting firm?

4 A That's correct.

5 Q It's a fair statement, is it not, Mr. Labrie, that this dis-
6 cussion that we have now had of the various alternatives
7 that might have been considered for the power to be generated
8 as you now propose it for Colstrip, did not reach the state
9 of serious consideration, at least to be memorialized in any
10 written report, of which you are aware, prior to the decision to
11 go to the Colstrip units 1 and 2?

12 A Not that I can recall specifically referred to 3 and 4.

13 Q How about 1 and 2?

14 A No. We may have done some nuclear versus coal, but not these
15 futuristic things, no.

16 Q I suppose futuristic is a somewhat relative term, that is,
17 it depends upon when you're saying something is in the future?

18 A That's right.

19 Q It would have been more futuristic for you in 1969 and 1970
20 than it is in 1975-1976?

21 A That's right.

22 Q By the time you get to 1983-1985, you would expect those
23 futuristic designs would be present rather than futuristic?

24 A No, I don't expect these things to be present in '83 and '85,
25 but I certainly think that we want to continue to look at them
26 and make sure -- that's part of my job, is to be sure that we
27 are looking at all the viable alternatives.

28 Q Well, it's fair to say that one of the reasons for going to

1 Colstrip 1 and 2, in the first instance, was not the fact
2 that you ruled out these futuristic designs, isn't it?

3 A Was not the fact that we ruled them out?

4 Q They weren't ruled into your decision-making process in the
5 first instance, were they?

6 A Well, let's go down through them one at a time. I would say
7 that for the time being, we ruled out geothermal by virtue
8 of the studies that I had made, and we ruled out nuclear, and
9 wind power, in terms of a 1400-megawatt unit, is not a viable
10 alternative. so I guess it was never ruled in. The possibili-
11 ty of developing solar power is many years in the future and
12 so it was never considered seriously as an alternative for
13 3 and 4. Coal gasification, we looked at periodically, and
14 it certainly wasn't a viable alternative, so I guess it wasn't
15 ruled in.

16 Q So the answer is yes?

17 A Yes.

18 Q One of the reasons that you did decide, however, to go to
19 Colstrip to build your units was that the land values there
20 were lower than some other areas, isn't that true?

21 A I don't know. I can't tell you from memory whether the cost
22 of land was included for Trident, Clarkston, Three Forks --
23 that spot that we looked at out of Cushman -- generally, I
24 suspect that they were all -- land is a pretty insignificant
25 thing. I don't think that it was a consideration that amount-
26 ed to anything.

27 Q You say an insignificant thing?

28 A As far as the amount of land we were using and the costs of

1 obtaining that land.

2 Q I'm going to shift to another subject, Mr. Labrie. You
3 addressed the argument that has been raised that the Colstrip
4 units 3 and 4 should not be permitted to proceed until after
5 some assessment can be made of the Colstrip units 1 and 2.
6 Your response to that is that such an argument can be made
7 about any plant any time, any place, and that that argument
8 would result in -- if consistently followed -- having a
9 utility company be delinquent in supplying the power that its
10 customers required?

11 A That's right.

12 Q It's not hard to open Pandora's box or to unfurl consistent
13 arguments, but isn't it a fairer statement, Mr. Labrie, that
14 the argument really says, you should wait until Colstrip units
15 1 and 2 have been assessed before you can determine whether
16 those mistakes should have been certified? Isn't that what
17 the argument really says?

18 A Would you repeat that, please?

19 Q You should wait until Colstrip units 1 and 2 have been assess-
20 ed until those mistakes should have been certified?

21 A Until what mistakes have been certified?

22 Q Whatever mistakes are found in Colstrip 1 and 2. There will
23 be some, of course. I mean, that's always the case, isn't it?

24 A Well, I'm still not sure I know what your question is, Mr.
25 Shenker. I have expressed the view that you can always find
26 some reason to not build a plant if you choose to put a reason
27 on it.

28 Q That's what this hearing is for, of course, isn't it?

1 A Yes. I believe that we've got copious testimony in the
2 record that our air quality control facilities are going to
3 be adequate and I think the Board of Health has so ruled, so
4 I don't --

5 Q Yes, you addressed that, too, in your statement, Mr. Labrie,
6 and you say that if it's necessary to make some modifications
7 on Colstrip 3 and 4, you'll know that after you have the
8 benefit of experience from Colstrip 1 and 2, and presumably,
9 what your argument says is, once you've been certified for
10 the Colstrip units 3 and 4 as being environmentally compatible,
11 you can always change what you intended to do in order to
12 make sure that the Board didn't make a mistake.

13 A I think this is in reference to trying to improve the main-
14 tenance that will be necessary on scrubbers. On Colstrip 1
15 and 2, I believe that the performance is adequately demon-
16 strated by the pilot plant and that in order to reduce the
17 amount of maintenance required to control wet-dry interface
18 and things like this, we may waste or change the configuration
19 of the nozzles to reduce the spray mist in the area where the
20 wet-dry interface is, and this sort of thing.

21 Q Let me ask you about a couple of aspects of the impact of
22 your plant as proposed for the Colstrip units 3 and 4. Your
23 statement says that the few scattered trees in the area around
24 Colstrip are not considered merchantable. Do you mean to im-
25 ply by that that vegetative damage to those trees should not
26 be a matter of concern?

27 A Heavens, no. I was trying to assess the economic value of
28 the property.

1 Q Then, another aspect of the impact of your plant upon en-
2 vironmental compatability, I assume, indeed, of governmental
3 statutes, is on the OSHA standards, the Occupational Safety
4 and Health Administration. Your statement says that noise
5 standards will continue to be met. The implication of that
6 is that they are being met now and they will continue to be
7 met in the future. The fact of the matter is, Mr. Labrie,
8 that unless you do something about the noise levels in the
9 Colstrip unit 1, you will be in violation of noise standards
10 there, isn't that true?

11 A The noise standards say that there are three ways to control
12 noise for occupational hazard purposes. Now, one is to order
13 equipment that is quiet --

14 Q And you haven't done that yet?

15 A In some cases, we have done that, where it was possible and
16 feasible. Another way to control noise is, after the equip-
17 ment is installed, to take tests and find out in what area
18 the noise is too high and put in soundproofing and baffling
19 as required, and the third way --

20 Q That hasn't been done yet, either?

21 A That has not been done, because we've just gotten on the line
22 so we haven't had time to, and we do have a team from Bechtel
23 coming in for this purpose. The third way to control noise
24 is to limit the amount of exposure that an individual is sub-
25 jected to, and this we will have to do until we get the other
26 method accomplished, and this is the normal way that you have
27 to design a plant and comply with OSHA standards.

28 Q Unless you take one of the three routes that you have just

1 described, Mr. Labrie, beyond the point that you have taken
2 them thus far, you will not be in compliance with OSHA stan-
3 dards, will you?

4 A Oh, I think there are places in the plant where you could not
5 have a man working for eight hours without being in excess of
6 OSHA standards.

7 Q And your general approach, as your statement indicates is
8 that you will build your plant, see what the problems are,
9 and take some action after that?

10 A We took some action before the plant was built in that some
11 of the items that produce noise that are common, we asked for
12 specifications from the manufacturer and attempted to pur-
13 chase equipment that was less noisy.

14 Q Less noisy than what?

15 A Well, noise is relative, so less noisy than it would be if
16 we didn't purchase the more silent equipment.

17 Q Is your equipment less noisy in the Colstrip units than it is
18 in the Corette station?

19 A I doubt it. We've got bigger equipment and higher pressures.

20 Q The last area I would like to inquire of you about, Mr. La-
21 brie, is on the question of the minimum cost for power
22 plants. Where, in previous discussions, you've given me your
23 philosophical point of view, that the lowest cost plant is
24 the one that best meets the needs of society at the least
25 cost, does society for you still mean all of society, in
26 general, and not just those people who pay the power bills?

27 A Now, let's see -- first of all, you're quoting me as giving
28 a philosophical point of view, and I take it that that was in

1 deposition some time ago?

2 Q Yes, sir.

3 A I think that society should be both those who pay power bills
4 and those who do not pay power bills; however, the impact of
5 a given plant would be much greater on those in the general
6 area where they pay the power bills, or at least, where the
7 plant is located, among the two.

8 Q And that should be taken into consideration, of course, but
9 your definition of a good site for a power plant is one which
10 best serves all members of the public, not simply those in
11 the state in which the power plant is located, is that right?

12 A You used the term, "least cost," and the term, "cost," has a
13 lot of connotations.

14 Q Let's take away the term, cost, and let's just look at sites.
15 Your definition of a good site for a power plant is one which
16 best serves all members of the public, not simply those in
17 the state in which the power plant is located?

18 A To some extent, I believe that's true, yes.

19 Q To what extent is it not true?

20 A Well, I've already said that the impact on the local citizen-
21 ry and on those who are paying the bills is to be weighed in
22 the location of the power plant.

23 Q And with that qualification, I have correctly stated your
24 philosophy, I take it?

25 A I think so.

26 MR. SHENKER: Okay. I have no further questions
27 of you at this time, Mr. Labrie. Oh, yes, one last
28 thing --

1 Q The man who is principally responsible for regional energy
2 planning within the Montana Power Company is now, and has
3 been for some numbers of months, Don Gregg, isn't that right?

4 A That's right.

5 Q He still works for the power company?

6 A Yes, he does.

7 MR. SHENKER: I have no further questions at this
8 time.

9 HEARING EXAMINER: Mr. Meloy.

10
11 Cross, by Northern Cheyenne Tribe, Inc.

12 By Mr. Meloy:

13 Q Mr. Labrie, according to your statement, you are Chief
14 Engineer of the Montana Power Company, but the source of your
15 testimony here today and yesterday comes from your experience
16 as Supervisor of the planning section of the engineering
17 department during the course of the planning for the siting
18 of 1, 2, 3 and 4, is that correct?

19 A Well, perhaps also as Supervisor of the generation engineer-
20 ing section of the Montana Power Company.

21 Q Since you are the person who has been chosen to tell us
22 about the background, the planning background and those ele-
23 ments of the decision to build units 1 and 2 and as you say,
24 thence units 3 and 4 at Colstrip, I take it, then, that you
25 are the most informed among those people who were in on that
26 decision, is that correct?

27 A Well, I would hope that I am informed. I don't know how you
28 use the word "most." It would kind of depend upon the

1 question. I think I'm informed on the subject I've been
2 testifying on.

3 Q Well, to the extent that you performed many of the studies
4 that went into the decision, I take it that in that context
5 you are well informed about the background of that decision?

6 A Yes.

7 Q I would like to go through your statement, Mr. Labrie, and
8 it would probably be helpful if you had it in front of you
9 there. I'm going to refer to some pages in the statement.
10 When I went through the statement to determine what basis you
11 used to determine that Colstrip 1 and 2 and thence 3 and 4
12 should be built at Colstrip, I looked for studies that you
13 had done. It certainly isn't the usual case for the Montana
14 Power Company or the other utilities involved in this project
15 to make a decision and then do studies later in support of
16 that decision, is it?

17 A No.

18 Q Normally, the proper method of approaching a decision such as
19 siting a power plant is done on the basis of studies that
20 you've made prior to the decision?

21 A That's correct.

22 Q Now, as I look through your statement, the first reference I
23 find to a study is an economic study on page 5 comparing
24 Livingston, Cushman, and Colstrip, and the studies indicated
25 that there was not too much difference between overall costs
26 at the three locations, so that study had to do with cost
27 comparisons, is that right?

28 A Where are you looking?

1 Q Page 5, line 5.

2 A Okay. Now, what's your question?

3 Q The question is, that economic study compared overall costs
4 at the three locations, is that right?

5 A Yes.

6 Q Then you made a separate study comparing Colstrip against
7 Nichols?

8 A Yes.

9 Q Line 11, "We found that there would be very little cost
10 difference between two locations as long as one assumed that
11 you could not use the Yellowstone River for cooling," so
12 that study, too, had to do with cost, is that right?

13 A Yes.

14 Q On page 6, line 15, you talk about criteria you use in
15 economic studies and you say that one of the main criteria
16 involved in any economic study relative to whether to build
17 a plant or not is consideration as to the lowest cost alter-
18 natives.

19 A That's right.

20 Q The next reference that I find to studies is on page 9, line
21 8 through 12, and you refer to the siting studies that led to
22 the location of the Colstrip location for units 1 and 2 in-
23 cluded all of these considerations, and you're referring to
24 base load generation and size of our load growth reserve
25 consideration, economies of scale, and finally, you conclude
26 the 350-megawatt unit was the economic choice. That study,
27 too, was an economic study, is that correct?

28 A Yes.

1 A Yes.

2 Q Then, on page 10, line 15, you refer to "the first four of
3 the companies named above authorized a feasibility study to
4 determine whether plants in the Colstrip area could meet this
5 need," referring to need in the Pacific Northwest, is that
6 right?

7 A That's right.

8 Q Does that feasibility study take into consideration the
9 economics of producing electricity at Colstrip?

10 A Yes.

11 Q The next reference to a study is on page 11, Applicants' Ex-
12 hibit No. 16, the Colstrip-Pacific Northwest Study. That
13 study had to do with deficiencies of resources, and the ob-
14 ject of the study was to determine the transmission line re-
15 quirements for a total of 2100 megawatts of generation in the
16 Colstrip area, and then subsequently, the study was extended
17 to include the capability of the transmission network to
18 carry additional generation beyond the foregoing four units.
19 I take it, then, that that study was basically a study to de-
20 termine the economics of transmission of electricity, is
21 that right?

22 A That's right.

23 Q Now, the next study is Applicants' Exhibit No. 17 and you
24 start talking about that on page 13 of your statement and you
25 summarize that by saying that that constitutes -- No. 17 con-
26 stitutes the results of Montana Power study No. 4 and is an
27 economic comparison of single ownership, et cetera, and it's
28 again, a least cost alternative type study, is that correct?

1 A Yes.

2 Q And that brings me to a question which didn't occur to me un-
3 til Mr. Shenker was asking you questions about the timing of
4 that study. You had applied -- Montana Power and the other
5 applicants had applied for their permit to build at Colstrip
6 on June 6, 1973, yet you didn't present your economic study
7 to the Board of Directors of the Montana Power Company until
8 June 19, 1973, and according to your statement, that was the
9 basis for proceeding with Colstrip units 3 and 4 project.
10 That would indicate to me that you gave your directors a study
11 after you had made the decision and had, indeed, filed an
12 application to build units 3 and 4. Is that the normal way
13 in which you go about doing studies?

14 A I think I testified previously that we had an awful lot of
15 input into the Board of Directors meeting on the study as it
16 was progressing and the purpose of the presentation in June
17 '74 was to put all of this together and show the Board of
18 Directors the whole thing at one time in an organized manner
19 so that they would be fully informed, but they'd already been
20 knowledgeable about the fact that this was the most economic
21 alternative for us.

22 Q In other words, they had already decided on the basis of prior
23 studies that the best site was at Colstrip and all you were
24 doing on June 19th was telling them what a good decision they
25 made?

26 A I don't recall whether they had voted to take formal action
27 before this or not. I don't think they did. I think they
28 probably did that at the meeting when I made the presentation,

1 but --

2 Q You mean to say you applied for a permit before the Board of
3 Directors took formal action on that decision?

4 A I'm not sure of that. It wouldn't surprise me.

5 Q That wouldn't surprise you?

6 A Because there weren't any Board of Directors members that
7 were objecting to this at all. All they wanted was the final
8 thing laid out in front of them, and that's what they got.
9 I'm sure the Board of Directors had knowledge of the fact
10 that we were filing the application.

11 HEARING EXAMINER: We'll recess until 1:30.

12 (HEARING RECESSED AT 12:00 NOON.)
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

1 Following the luncheon recess, the hearing reconvened at
2 1:40 P.M. on January 20, 1976.

3 HEARINGS EXAMINER: We will go back on the record
4 and proceed with Mr. Meloy's cross-examination of Mr.
5 Labrie.

6
7 CONTINUATION OF EXAMINATION OF ROBERT LABRIE

8 Cross, by Northern Cheyenne Tribes, Inc.

9 By Mr. Meloy (continuing):

10 Q Mr. Labrie, before we were so rudely interrupted by the
11 dinner bell, I had been discussing with you the various
12 studies which you had performed as a basis for your decision
13 to locate the steam generation plants at Colstrip. We had
14 determined as we went through your statement that these studies
15 indeed were economic studies. On page -- we were discussing
16 when we broke for lunch Applicants' Exhibit No. 17, which
17 discussed, among other things, whether the expansion of
18 existing hydro systems was the most economically attractive
19 alternative, and whether there were any other attractive
20 alternatives to building power plants at Colstrip. On page
21 18 you did a study -- you say you did a study in 1969, or
22 thereabouts, of the break even costs of nuclear units compared
23 with coal-fired units, and as I look through that testimony,
24 would it be fair to say that that, too, is an economic study?

25 A Did you end up asking me a question?

26 Q Yes.

27 A I have a little difficulty hearing you, Mr. Meloy. Did you
28 say is that an economic study?

1 Q Yes.

2 A Yes.

3 Q We're referring to the study comparing the feasibility of
4 nuclear plants.

5 A Yes.

6 Q These studies are all written studies, is that right?

7 A Yes, I believe so. I'm not sure I can remember everything
8 you mentioned, but as I recall they're all written studies.

9 Q Did you do any written studies that studied anything other
10 than economic feasibility of the plants?

11 A I think in response to the same question by Mr. Shenker I
12 alluded to comments on the Billings location and the fact
13 that we moved out of there due to environmental concerns.

14 Q Well, Mr. Shenker may have asked you a question different
15 from mine. Mine was, did you do any written studies other
16 than written economic studies upon which you based your
17 decision to site your plants at Colstrip?

18 A Okay, and what I mentioned was that in responding to the
19 same question from Mr. Shenker that there was mention of the
20 difficulty in Billings in some of these socalled economic
21 studies.

22 Q Then the input from those -- what kinds of considerations
23 were made, then, at Billings?

24 A What kind of considerations?

25 Q Yes, noneconomic -- I'm inquiring about any studies, written
26 studies, you did on other than economic matters that related
27 to your decision to base these plants at Colstrip?

28 A We just listed in our studies that one of the reasons for

1 not going for further development at Billings at this time
2 was that we had problems with the air pollution control
3 equipment.

4 Q But that didn't naturally lead you to go to Colstrip?

5 A No.

6 Q I'm inquiring about the basis upon which you made your
7 decision to go to Colstrip. What written studies other than
8 economic studies did you perform that served as a basis for
9 your decision to place the plants at Colstrip?

10 A I can't recall any that I can lay my hands on without making
11 a search of the files.

12 Q When you -- on page 3 of your statement you say that you
13 considered the site at Clarkston, however you rejected it
14 because it was located in a deep valley, and even though
15 this area is quite remote you were concerned with the air
16 pollution effect on vegetation in such a deep and narrow
17 valley. Did you do any meteorological studies to verify
18 the view that you took, I assume by just observation of
19 the terrain?

20 A No, we did not go in there and do a meteorological study
21 of that area. We knew enough about the action of steam
22 plant plumes to know that it was an undesirable area from
23 an economic -- from an environmental point of view.

24 Q Because it has an effect on vegetation, is that right?

25 A That's right.

26 Q And you explained to Mr. Shenker that, in answer to one
27 of his questions, trees die when sulfur dioxide accumulates
28 at a given point, and if you constructed in a valley you were

1 likely to get a concentration at a given point because of
2 the terrain, is that right?

3 A If you have a valley entrapment situation you can get vegeta-
4 tion within reach of the plume without the dilution that you
5 get from a more level type climate, and this was the concern
6 that we expressed about going into the Clarkston area. As
7 I mentioned, we did visit with Mr. Dightman, as I remember,
8 a meteorologist in Helena, about the conditions in the
9 Townsend area, and I expressed concern about this, but we did
10 not write a detailed environmental study. I knew of no
11 reason to do that at that time.

12 Q Did you write a nondetailed environmental study?

13 A Or a nondetailed environmental study that I can recall.
14 There very well may be some in our files, but I certainly
15 haven't looked at it from that point of view.

16 Q You mentioned in answer to Mr. Shenker's question about
17 accumulations of SO₂ at a given point --

18 A Pardon me, I can't hear you.

19 Q You mentioned in answer to Mr. Shenker's question about SO₂
20 damage because of accumulation at a given point, "That's
21 why we have a tall stack." Is that right?

22 A Well, what I'm saying is that in order to meet the standards
23 of concentration of sulfur dioxide in a plume, in order to
24 meet the emission standards, it would have to be four or five
25 hundred parts per million. Now, at ground level the ambient
26 standards require .1 ppm, as I recall, for 24 hours, so
27 there's a 6,000 to 1 ratio here between what the ground
28 level is and what's going to come out the stack.

1 Q What's coming out the stack ultimately hits the ground,
2 right?

3 A After it's been diluted, that's correct.

4 Q But if it continues to hit the ground at a given point
5 there could be accumulations that could cause the damage you
6 spoke of in the remote valley?

7 A Not if it's not exceeding the standard. This is what the
8 standards were based upon.

9 Q Well, Mr. Labrie, if you have a plume that hits a point and
10 continues to hit that point, you will have an accumulation
11 of SO₂, isn't that right?

12 A If you have an impingement situation such as you could have
13 in a valley entrapment, like putting a plant at Clarkston.
14 This would be a concern that I would have.

15 Q Did you hear Dr. Faith's testimony?

16 A I heard some of it.

17 Q Did you hear Dr. Faith tell us where that plume would hit
18 the ground at Colstrip, in the vicinity of Colstrip?

19 A I don't know whether I heard it or not. You're talking about
20 a valley entrapment situation and this isn't the case at
21 Colstrip.

22 Q No, we're talking about where the plume hits the ground,
23 where you might get accumulations.

24 A No, we're not. We're talking about a valley entrapment
25 situation.

26 Q Well, I'm talking about the place where the plume hits the
27 ground.

28 A Well, you asked me about Clarkston and why I was concerned

1 about locating a plant there, and the reason that I was
2 concerned about locating a plant there was that this was not
3 a logical place to put a power plant without getting into
4 air pollution difficulties. Now, that is not the same situa-
5 tion as exists at Colstrip.

6 Q But the fact remains, Mr. Labrie, that if you have an accumula-
7 tion at one point the damage is going to be as bad as if you
8 had an entrapment situation, isn't that right?

9 A If the accumulation at one point is the same as the accumula-
10 tion at another point, I presume that the damage would be the
11 same, if it's for the same period of time.

12 Q Well, let's assume that it's over a longer period of time.
13 It may take a little longer to damage the plants, but they
14 will be damaged, is that right?

15 A No, I don't believe that that's the case. I believe that
16 the EPA standards and the guide that they issued for air
17 quality control regulations were designed to keep the maximum
18 ground level concentration below .1 ppm. I believe they have
19 a curve in that criteria that they issued that shows this
20 and that there's a good deal of technological backup on why
21 they picked the standard the way they did. And that's why
22 we have state air pollution standards, to protect health and
23 the environment. And our desire was to built a plant in a
24 location where we could meet the air pollution standards, not
25 in a location where we could not.

26 Q That's why you had Dr. Faith testify that the plume would
27 hit the ground at a certain elevation, and that certaion
28 elevation happened to be Badger Peak. Do you know where

1 Badger Peak is?

2 A No, I don't.

3 Q Did you do any studies to determine whether the vegetation
4 at Badger Peak would be injured?

5 A I have no idea about this testimony. I'm not at all sure I
6 was here when Dr. Faith was testifying on the subject.

7 Q Wouldn't it be important to know whether there was going to
8 be damage to vegetation at Badger Peak before you built --

9 A Absolutely, that's why we got Dr. Faith in to make these
10 studies and to make that determination. There's an awful lot
11 of testimony in the record about this subject, and I'm cer-
12 tainly not knowledgeable about it at this point in time so
13 that I can quote figures to you on it.

14 Q My interest in this is what studies you did upon which you
15 based your decision to site the plants at 1, 2, 3 and 4.
16 You didn't hire Mr. Faith until after you made that decision.

17 A That's correct.

18 Q So how can you tell us right now that your consideration of
19 the possible vegetation damage at Badger Peak was a signifi-
20 cant or nonsignificant one when you didn't study it before
21 you made the decision?

22 A What I told you was that when we looked at the Clarkston site
23 we were most concerned about the fact that it would be
24 difficult to design an air pollution control system for a
25 plant located in that valley, and therefore we chose not to
26 locate there.

27 Q Do you know what the main economy of the Northern Cheyenne
28 Tribe is, Mr. Labrie?

1 A What the what is?

2 Q The main economic base of the Northern Cheyenne Tribe?

3 A Well, I would assume that it's agriculture.

4 Q Would you be surprised if I told you that it's cutting
5 timber?

6 A That's something I didn't know about. I guess to that extent
7 I'd be surprised.

8 Q You didn't do any studies of that, did you?

9 A I did not, no.

10 Q Do you know anything about the culture of the Northern
11 Cheyenne Tribe?

12 A Not a great deal.

13 Q Do you know anything about the archeological features of the
14 Northern Cheyenne Tribe and its reservation lands?

15 A No, this wouldn't be in my area of expertise. We did have
16 Westinghouse Environmental Services involved in these sorts
17 of things.

18 Q Then I take it your statement on page 32, line 11, where you
19 say, "We", and I assume you, because you're making the
20 statement, "anticipate no impact on any important historic,
21 architectural, archeological or cultural areas and features,"
22 if you don't know anything about those aspects in that area
23 how can you make that statement?

24 A A search of the historical -- there is a list of historical,
25 archeological features, and this was made in the course of
26 the studies by Westinghouse Environmental Services.

27 Q This was again after you made your decision to go ahead and
28 apply for a site at Colstrip, isn't that true?

1 A For 1 & 2, before the Siting Act was --

2 Q Well, you didn't get the Westinghouse Report until after
3 you made your application, did you?

4 A We hired Westinghouse in January of 1973 and we filed the
5 application in June of '73.

6 Q And you got your report in November of '73, isn't that right?

7 A Right, but in the meantime we were working with them and had
8 knowledge of the architectural -- archeological features.

9 Q You didn't do any written studies of the cultural features
10 of that area, did you?

11 A Supplementing archeological features, a consultant from the
12 University of Montana was hired to survey this, and at one
13 point in time I read the thing, the report that he produced.
14 Cultural? No. Our comment on cultural is that in the plant
15 site area itself there's a good deal of description in here
16 as to what the plant site area encompassed, and it was
17 grazing and dry land farming land, and I'm testifying that
18 on that grazing and dry land farming land we're not upsetting
19 cultural features. As far as the town is concerned, why,
20 we've already given much evidence to the fact that we're
21 improving the cultural situation in the town.

22 Q Do you know how far the Northern Cheyenne Reservation is
23 from your project?

24 A About 23 miles.

25 Q The boundaries of the Northern Cheyenne Reservation are 23
26 miles?

27 A Well, Lame Deer is 23 miles and it's just inside the reserva-
28 tion. There may be a point on the reservation that's closer

1 than 23 miles from out site.

2 Q Would you be surprised if I told you the reservation boundar-
3 ies were 9 miles from Colstrip and that there were folks
4 living between that boundary and Lame Deer?

5 A What?

6 Q And there were folks living between -- Cheyennes living
7 between that boundary and Lame Deer?

8 A Well, I don't know this. You're saying this; I'm not.

9 Q That wouldn't surprise you?

10 A I don't know.

11 Q You didn't do any studies to determine that, did you?

12 A I personally have not, no.

13 Q Did your company do any studies to determine that?

14 A We retained Westinghouse Environmental Services to do a study
15 of the area.

16 Q Would you be surprised to know that the Westinghouse study
17 doesn't mention the Northern Cheyennes?

18 A No, it was a regional assessment, and there's been a good
19 deal of testimony about this, and the Northern Cheyennes
20 were part of the region, but they didn't single them out
21 specifically.

22 Q Do you know anything about the crime problems on the reserva-
23 tion?

24 A Probably not much more than you do.

25 Q Well, Mr. Labrie, don't you think it's important to know that
26 in order to determine the impact of bringing that many
27 construction workers and that many new people into Colstrip
28 might have on the crime problem on the reservation before you

1 make your decision?

2 A I think it's most important to be sure in locating a plant
3 in this general area of the state that you would do it in
4 a manner whereby we would not be creating a town complex
5 that is essentially different than the community in which
6 we are locating. The area that we were moving into previously
7 had strip mines, and we've gone to a good deal of trouble
8 to make sure that the small town of Colstrip is well planned
9 and is consistent with the surrounding community, and I
10 believe that the impact of that town and the sociological
11 features of it would have a very good impact on the society
12 in the area.

13 Q But if you don't know anything about the community that lives
14 right outside of the project, how can you say that it will
15 have a good or a bad benefit?

16 A Because I didn't personally study that. This was done by
17 Westinghouse Environmental Systems, and I believe that there
18 is a witness who will cover this subject.

19 Q You did 32 pages of economic studies, isn't that right, upon
20 which you based your decision, and you didn't do any environ-
21 mental studies, you didn't do any cultural studies, you
22 didn't do any sociological studies, you didn't do any
23 historical studies -- in fact, you devote one small paragraph
24 to those considerations, by passing them off as saying, "We
25 anticipate no impact. None of the foregoing are known to
26 exist." Isn't that right?

27 A As I have previously testified, we looked at a goodly number
28 of different logical sites and we eliminated many of them

1 from consideration for environmental reasons.

2 MR. MELOY: I have no further questions.

3 HEARINGS EXAMINER: Mr. Graybill.

4 MR. GRAYBILL: Yes, I have some questions.

5
6 Cross, by Northern Plains Resource Council

7 By Mr. Graybill:

8 Q In your statement, Mr. Labrie, on page 35, you say, line 28,
9 "There will be no adverse impact as a result of surface
10 water runoff from or near the Colstrip plants into existing
11 streams or otherwise." You're aware that Armell's Creek runs
12 within a few feet or 100 feet of the plant, right?

13 A 100 feet of the plant area, yes.

14 Q All right. Now, in the Westinghouse Environmental Study
15 which you've just been testifying about, on page 93 --
16 technically, it's page 2-93 -- under heading 2.3.7.1, it says,
17 "Rain water from the plant area will be discharged into
18 Armell's Creek via an open unlined drainage ditch. Roof
19 drainage will be channeled to the ditch through buried pipes.
20 Surface drainage will be intercepted and diverted to the main
21 ditch through open ditches, culverts and catch basins." Are
22 you familiar with that reference in the Westinghouse report?

23 A I don't recall that reference, although you just read it to
24 me so I know what it says.

25 Q Do you want to look at it?

26 A I am familiar with what our drainage system that we have
27 presently got designed and contemplated consists of.

28 Q Well, as I understand the Westinghouse report, it's a report

1 to the Department of Natural Resources of what the Colstrip
2 plant is to consist. Is that reference on page 2-93 accurate?

3 A Yes, I believe it's generally accurate.

4 Q And so you're telling us today that you are going to do the
5 things that it says in there, namely, have an open ditch that
6 runs from the plant site into Armell's Creek?

7 A That's correct.

8 Q What testing have you done to determine what will flow out
9 of the open ditch?

10 A The plant yard drainage system will carry the same water
11 that is running off of that property now, off of there, and
12 we have had some discussions asking about runoff regulations
13 from surface ground such as this with the State Health
14 Department Water Bureau. If a future regulation comes about
15 whereby a settling basin is required, why, we have room
16 planned for such a basin. At the present time, this is just
17 ground and streets and landscape area where erosion will be
18 controlled and water that runs off will be normal to any
19 other ground and area.

20 Q There was no open ditch there before you got the plant,
21 was there?

22 A The open ditch is there as part of the erosion control feature.

23 Q Answer my question. Before you built the plant there, was
24 there an open ditch when you bought the land?

25 A I believe there was, because the open ditch is located in a
26 borrow pit next to the railroad track, and I believe it was
27 a borrow pit in the first place. Now, we put some culverts
28 in it where we cross this railroad track, and things like

1 that, to be sure that we were controlling the runoff properly.

2 Q Have you put hard surfaces over any of the land that you
3 bought? By that I mean, have you put roofs that collect
4 water? Have you put streets that collect water? Have you
5 put metals that collect water? Or can the water soak into
6 the entire acreage the way it could when it was a field?

7 A No, there will be some hard surfaces, and as such, there
8 will be some runoff.

9 Q Okay. Now, my question was have you made any tests to deter-
10 mine what's going to be in the runoff?

11 A We haven't got the hard surfaces yet, so I don't know how
12 we could.

13 Q You don't know how you could make a test as to what's going
14 to happen in the future?

15 A What we have said is that if the settling basin is desirable,
16 why, we certainly intend to comply with any desires of the
17 Health Department Water Bureau.

18 Q I certainly understand that you intend to comply with any-
19 thing that they want.

20 A There are no regulations at this point in time, so it's a
21 little hard to do anything other than that.

22 Q Of course there are regulations. There are regulations which
23 I presume you are familiar with that control the runoff of
24 waters into state streams. Now, we don't have to go back
25 and start over again with the water case and teach you that
26 there are laws about running water into state streams, do
27 we? Don't you know those laws? Have you designed this plant
28 without knowing about the law that says that you can't run

1 water into a state stream unless it meets certain specifica-
2 tions?

3 A I have designed this plant to prevent industrial process
4 water runoff.

5 Q Well, have you designed it to prevent waste water runoff,
6 as described in the Westinghouse report? In other words,
7 have you designed it to run this water into a settling pond
8 instead of the way it says in the Westinghouse report?

9 A I think the Westinghouse report says surface drainage will
10 be intercepted and diverted to the main ditch through open
11 ditches, culverts and catch basins, and to the extent that
12 a catch basin is desirable, we intend to put one in.

13 Q Have you designed a catch basin for the plant runoff?

14 A No, we have reserved a location for it and intend to meet
15 with the State and comply with any of their wishes.

16 Q So the fact of the matter is that today you don't know
17 whether you're going to have it or not, and you don't know
18 whether anything that's going to be in it is going to be
19 dilatorious or not, isn't that true?

20 A I have reason to believe that there won't be anything dilator-
21 ious if we put a catch basin in --

22 Q I want to know the basis of your reason.

23 A The basis of my reason is that there isn't anything dilatori-
24 ous about the ground that we're talking about.

25 Q Are you going to be handling any acid substances in the plant
26 area at all?

27 A All those are industrial process, and we're taking great
28 pains to be sure that they don't end up in this runoff system.

1 Q All right, now, what about fallout in the plant area,
2 spillage in the plant area? What about dust on the plant
3 roof that's going to wash out down this system? Have you
4 made any analysis of this situation at all?

5 A Let's take one at a time. Fallout from what?

6 Q You're building two stacks there. It's my understanding
7 that you're going to burn two tons of coal a minute, or
8 something, isn't that right? And that this pumps tons of
9 SO₂ into the air. After you've already sludged out and
10 taken a lot of it out through the back door in the sludge
11 ponds, tons of it go out into the air. We've had a whole
12 hearing about that. Now, you have testified, I think, your-
13 self, and you surely have heard other testimony, that what
14 goes up the stack eventually comes down to the ground, right?

15 A That's correct.

16 Q Are you telling me that none of it's going to come down to
17 the ground within the plant area?

18 A I said what comes down will come down over a wide and
19 dispersed area.

20 Q Will any of it come down in the plant area?

21 A I certainly can't say that none will. Some will come down
22 everywhere.

23 Q Of course, and if you're going to have an updraft taking it
24 out and it takes anything very heavy up, it's likely to
25 drop back down, isn't it?

26 A Actually, the ground level concentrations close to the plant
27 would be less than at some distance from it.

28 Q Well, is that based on Mr. Faith's testimony, or where do you

1 get that idea?

2 A From Mr. Faith and also the meteorologist from Denver.

3 Q But of course, what falls closest you've just testified
4 might be collected on a large roof. We're all aware of the
5 fact there's a big building there, isn't there?

6 A I certainly haven't got a plant pollution control system that
7 is going to be such that dust will collect on cars and so on.
8 We have a much better one than that.

9 Q You don't think it's going to collect on cars down there?

10 A I don't think that you'll see any noticeable dust on cars at
11 all.

12 Q Over any period of time?

13 A Well, if you leave your car parked long enough, there will
14 be dust from all areas, certainly.

15 Q I am familiar with other plants in the state where in fact
16 measurable amounts build up in six months' time. Now, maybe
17 your plant's different. That's what I'm asking.

18 A Well, what I'm saying is that the fallout from stacks is not
19 -- the area of greatest concentration is not next to the plant.

20 Q What about the area of next to greatest concentration? I'm
21 not talking about the maximum concentration. I'm asking, it's
22 a matter of fact, isn't it, that fallout is going to occur
23 in the plant area?

24 A It's a matter of fact that some minute fallout from this
25 plant, from the dust in the surrounding area and so on, will
26 occur in the plant area.

27 Q And it's also a matter of fact that unless you pave it there's
28 going to be erosion, isn't there?

1 A Unless what?

2 Q Unless you pave the whole area, there's going to be street
3 and dirt -- dust -- erosion, as cars and --

4 A I don't think so. In fact, I think there will be less
5 erosion and dust and dirt in that plant area than there is
6 now, because we're going to great pains to vegetate to
7 control dust and dirt, and we're putting in a great deal of
8 landscaping, and besides that, why, we've got hard surfaced
9 areas where our vehicles will be going. So it shouldn't be
10 any dustier than the town of Colstrip.

11 Q Then what are the Westinghouse people talking about when they
12 say that you're -- why do you need a ditch at all, just to
13 take pure rain water that you could barrel and wash hair with?

14 A Why do what?

15 Q In other words, all I want to know is what tests you've made
16 of the surface drainage from the plant site, if any?

17 A I don't recall making any tests at this point in time. Of
18 course, this plant isn't built, so I don't know how we can.

19 Q Well, of course you can make tests ahead of time, but I
20 shouldn't be commenting. Let me ask you this question: You
21 say that you've left space for a pond, or a settling tank,
22 is that right?

23 A We've left space for a settling basin if one is desired.

24 Q Yes, if one is needed, and you say that you've talked to the
25 Department of Health about this, and if they require one,
26 you'll build one, right?

27 A That's right. There are no regulations that require it at
28 this point in time.

1 Q Why would they require one?

2 A I don't know. I think that the Board of Health is going to
3 -- or the Department of Health Water Bureau is going to be
4 much more concerned about runoffs from everything in the
5 future, and we want to be in a position so that we can meet
6 any future requirements, as well as any present ones.

7 Q So what you're saying is that although your statement says
8 as a flat matter that there will be no adverse effect, that
9 in fact, there may be an adverse effect, and if there is,
10 you'll be able to fix it with a pond. Is that what you're
11 saying?

12 A Well, I know of no adverse effect. What I'm saying is that
13 we'll put a pond area in there in case we need to settle
14 to be sure that there's no adverse effect beyond that
15 pond area.

16 Q Mr. Labrie, I'm aware that if you've made no tests and
17 haven't thought seriously about it that you wouldn't know
18 about any adverse effects, but --

19 A Well, we designed the ditches and the culverts, and this
20 sort of thing, to control runoff. We haven't made any tests
21 because the --

22 Q Is there runoff there now, Mr. Labrie?

23 A To some small extent, yes, a very small amount.

24 Q Does that borrow pit empty into Armell's Creek?

25 A I don't know if it's ever had any water in it or not. I
26 haven't seen any.

27 Q So you haven't even done enough testing to know whether there
28 is any runoff, is that right?

1 A I know that we calculate what runoff might occur under
2 adverse conditions so that you can design a collection
3 system to control it, and we have so installed it, but I
4 don't know if any of these adverse conditions have ever
5 occurred, so I don't know if there's ever been any runoff
6 yet or not.

7 Q You really did do some calculating on it?

8 A Well, Bechtel did, as part of their design. It's a normal
9 civil engineering function to design the culverts and
10 drainage ditches.

11 Q So in other words, the mere fact that Bechtel put in a cul-
12 vert leads you to believe there might be runoff someday, is
13 that right?

14 A The culvert system would be designed for a given snow melt
15 or rainfall condition, so it can control that.

16 Q How many years have you been building plants 1 & 2?

17 A How many what?

18 Q Years have you been building that?

19 A We started construction in 1971.

20 Q So at least four years, going on five, is that right?

21 A That's right.

22 Q Has there been abnormal or normal rainfall during that period?

23 A I can't recall.

24 Q Nobody's bothered to test to see whether that drainage ditch
25 connects to Armell's Creek, is that right?

26 A Nobody's bothered to check to see if it connects to Armell's
27 Creek?

28 Q Well, I'm asking you. Does it or doesn't it connect? I

1 understand you're the chief engineer for Montana Power
2 Company and that you know quite a bit about Colstrip. Does
3 it or doesn't it connect? That's a matter of fact.

4 A Well, yes. Yes, the drainage ditch is the old borrow pit
5 and it's probably been plowed out so that it's a recognizable
6 drainage ditch, and any culverts have been put in that were
7 required, and this sort of thing, and it does connect to
8 Armell's Creek.

9 Q Okay. Now, then, if it does connect, do you think it runs
10 water, ever?

11 A I would presume that at times it will run water. I can't
12 tell you whether it has run water or not.

13 Q Now, for five years, nearly, you've been building down there.
14 Have you or Bechtel or anybody under your authority or
15 anybody to your knowledge made any tests of the quality of
16 the water that runs from that drainage ditch into Armell's
17 Creek?

18 A No, sir.

19 Q Well, if that's true, that you haven't, then how can you make
20 the flat out statement that there will be no pollution, when
21 you really don't know?

22 A Because there won't be any.

23 Q Well, you haven't tested. You don't know. Are you saying
24 that if there is you're going to catch it and do something
25 with it? Is that it?

26 A Yes. If that's what's necessary to control pollution,
27 that's what we'll do.

28 Q Well, of course, on that basis the whole plant could be built

1 without a Siting Act, which apparently is your idea, is that
2 it?

3 A Well, we're talking about the site for Units 1 & 2 which
4 was built without a Siting Act. This system of drainage
5 was put in with the design of Units 1 & 2.

6 Q We're also talking about the sites for 3 & 4, and you have
7 said there will be no adverse impact, and you admit that
8 you haven't tested, that you don't know how much water runs
9 there, that nobody has done a study of it.

10 A That's right, and our conversations with the Water Bureau
11 for Units 1 & 2, are we going to need in the future to put
12 in a drainage basin or not, and as a precaution, in case
13 there's anybody that would ever assume that we should need
14 one, we're going to leave room for one and they can easily
15 put one in. Now, if 3 & 4 come along, obviously this same
16 drainage system will be used for 3 & 4 as exists now for
17 1 & 2.

18 Q And whether or not it would pollute would depend on what ran
19 down the ditch, wouldn't it?

20 A Yes.

21 Q And you don't know what that is?

22 A Well, as I've commented, I believe that the area will be
23 vegetated and there will not be bare ground any worse than
24 is what there now, so that the runoff shouldn't be any worse
25 than it is at the present time, and this is just normal run-
26 off, which is what creates Armell's Creek.

27 Q Do you bring any substances into the plant site that aren't
28 there now? When the plant is in operation?

1 A Yes, we bring coal in.

2 Q Do you bring anything else in?

3 A What?

4 Q Do you bring anything else in?

5 A Yes, we bring lime in.

6 Q Yes, anything else?

7 A Water.

8 Q Anything else?

9 A We certainly have lubricating oils and greases.

10 Q So the fact of the matter is that you know that you bring

11 a lot of substances onto the land that wasn't there originally,

12 right?

13 A And we have a system of collection for the oil, for instance,

14 and the lime goes into our settling ponds and is not involved

15 in this drainage area, and judging from the experience we

16 had at Corette on the coal pile, I don't think anything is

17 necessary, but if it is we will obviously put a settling basin

18 in for that.

19 Q Mr. Labrie, I'm aware that Montana Power and its applicant

20 friends will take any steps necessary -- and by "necessary,"

21 I presume we understand whatever the Department of Health

22 or Board of Health orders -- but what I'm trying to find out

23 is whether you planned for that.

24 A Well, as I told you, we planned a drainage system that's a

25 normal drainage system for any industrial site. It is a

26 well thought out one, and we have planned steps to control

27 erosion, and because of this I don't think that we're going

28 to have any environmental impact.

1 Q All right, let's go to another subject. All of this material
2 that goes up the chimney does come down somewhere, and
3 although it is widely dispersed your experts, as well as
4 the experts on this side of the aisle, have admitted that
5 it all comes down to the ground somewhere, and I want to
6 know what studies you made, or your side, your people made,
7 of the impact that this dropping of pollutant substances from
8 the air onto the whole landscape for many miles around
9 Colstrip? What study has been made of the effect that will
10 have on the streams and the water supply, the surface water
11 supply, in the Colstrip area?

12 A There have been some very detailed studies on this that
13 were done by Westinghouse Environmental Systems, and I
14 certainly can't quote the numbers now, but I can recall the
15 studies.

16 Q Are they in evidence in this case?

17 A I don't know.

18 Q Well, do you have access to the studies?

19 A At this instant time I don't know where they are, but I've
20 seen them and I presume they're available, and they may be
21 going into testimony yet. Can I ask my counsel that?

22 Q Certainly, as far as I'm concerned.

23 (OFF THE RECORD DISCUSSION BETWEEN WITNESS AND MR. PETERSON)

24 A It is a detailed study that was done by Dr. Pete Edmons, of
25 which you have a copy already. This was done on the effect
26 on the ecosystem of the effluents from the stack.

27 Q What is his name?

28 A Dr. Pete Edmons. E-D-M-O-N-S.

1 Q What's your basis for saying that I have a copy?

2 MR. PETERSON: You were given a copy with the
3 testimony.

4 MR. GRAYBILL: In other words, it's in this part
5 of the hearing's testimony?

6 MR. PETERSON: That is absolutely correct.

7 MR. GRAYBILL: Do you happen to know the exhibit
8 number?

9 MR. PETERSON: We didn't put exhibit numbers on it.
10 It's in the testimony.

11 Q Is the entire study that was handed to you included as part
12 of Pete Edmons' testimony here, to your knowledge?

13 A Well, Pete Edmons was the gentleman who was doing the study
14 and that's the study that I'm referring to, the one that he's
15 using in his testimony.

16 Q Well, I understand the difference between testimony and a
17 statement or a study. If you have a copy of the study, I'd
18 like you to supply it.

19 A I don't have a copy of the study.

20 Q Does the Power Company have a copy?

21 A I don't know.

22 Q Can you secure me one from Mr. Edmons, if you lost yours?

23 A I believe that the original study was what was done in the
24 Westinghouse report, and I believe that the work that he's
25 done since then was an update of that.

26 Q Well, I have studied the Westinghouse report quite carefully
27 and I don't recall that particular point being addressed, but
28 I'd be glad to have you point it out to me. What I want

1 is I want in hand the study from which apparently you made
2 your decision, and if it's Mr. Edmons' study, I certainly
3 want to see his testimony, but I'd like his study so I can
4 look at the backup material on his testimony. Will you get
5 that for me?

6 A I'll get whatever exists.

7 Q Well, you have testified that a study exists, right?

8 A Yes. I sat in the room while Pete Edmons was working on
9 this and discussed the results of it, and I presume that it's
10 in his testimony.

11 Q Okay. Well, I'm not interested in his testimony. I'm inter-
12 ested in his study that you looked at, sir.

13 A Well, I don't know if he has separate handwritten calculations
14 or what, but whatever is laying around that refers to this
15 subject, why, you may have.

16 Q Okay, it was written, wasn't it, his study?

17 A I assume it was.

18 Q Don't you know that if you've read it?

19 A I sat down and heard him express the results of his calcula-
20 tions on the --

21 Q Well, I think we understand each other. I'd like the study,
22 and I asked you once before for a study and I didn't get it
23 so I'd like to make it clear that I'd like this one. Now,
24 Mr. Labrie, Armell's Creek is affected, according to testimony
25 in the other part of this hearing, by runoff or leakage from
26 the storage pond, the big storage pond, the surge pond. I
27 am not interested particularly in whether you agree with the
28 112 gals. per minute that one of your witnesses testified to,

1 but you're aware that there will be runoff into Armell's
2 Creek that will raise the level of Armell's Creek? Are you
3 aware of that, and if you aren't, how can you make this
4 statement that there will be no adverse impact?

5 A Are you talking about the surge pond now?

6 Q Yes, I think it's -- was it Grimm, or who was the witness
7 that told us there was 112 gals. per minute that seep into
8 Armell's Creek from -- Berube -- Mr. Berube testified that
9 there'd be 112 gallons per minute leakage from the surge pond
10 into Armell's Creek. Let's just ask you the first question.
11 Are you aware that that's what he testified?

12 A I think it was Dennis McMillan from Bechtel that testified
13 to the --

14 MR. BELLINGHAM: Wait a minute. Are you talking
15 about surface water or underground water?

16 MR. GRAYBILL: Well, the point is that the water
17 leaks out of this big pond, and then it goes down and
18 comes into Armell's Creek and becomes part of the surface
19 water, you see. That was all explained by Mr. Berube.

20 Q Now, if you want to, I'll challenge the record and we'll go
21 find it, because I can find it. I've had it out a hundred
22 times.

23 A No, I think I understand what you're talking about, but I
24 wanted to be sure that I was talking about the same thing you
25 were.

26 Q Now, if we're talking about the same thing, Mr. Labrie --

27 A All right, this is the leakage from the surge pond that
28 would go into Armell's Creek if we don't pump it back into the

1 lake.

2 Q Fine. Now, if that raises the level of Armell's Creek, as
3 Mr. Berube said it would, in the wintertime, that's going
4 to cause additional icing downstream, and flooding, when the
5 creek freezes on a wider area. Did you take that into account
6 when you said that there would be no adverse impact as a re-
7 sult of surface water --

8 MR. BELLINGHAM: Just a moment. We object to that
9 line of inquiry on the ground that it's incompetent
10 and that it exceeds the scope of the direct.

11 MR. GRAYBILL: I'm reading right out of his state-
12 ment. I don't know how I can be more direct.

13 HEARINGS EXAMINER: Overruled.

14 MR. BELLINGHAM: He's referring to surface water
15 runoff, and this is not surface water runoff. It is
16 also repetitious as having been gone into in the previous
17 proceeding, the Board of Health hearing, and --

18 MR. GRAYBILL: All right, I move to strike lines
19 28 -- line 28 on page 35 and lines 1 and 2 on page
20 36 because if my questions are repetitious, that state-
21 ment is repetitious.

22 HEARINGS EXAMINER: Motion denied. I denied his
23 objection. Will you rephrase the question so we can get
24 it again?

25 Q Okay, the question is: Were you aware that this 112 gallons
26 per minute addition to Armell's Creek would cause greater
27 icing on the fields down below, and if so, did you take that
28 into account when you said there'd be no adverse impact as

1 a result of surface runoff?

2 A This water, of course, is Yellowstone River water that's
3 been pumped up to the surge pond and will leak out of it,
4 and if we don't choose to pump it back into the surge pond,
5 why, it would go into Armell's Creek. Armell's Creek is
6 an intermittent stream which in the wintertime does not
7 continually flow water, and actually I believe that the
8 impact on Armell's Creek would be beneficial rather than
9 adverse.

10 Q Well, there's been testimony already which I don't want to
11 repeat that if there's more water in it in the wintertime
12 it will ice and flood and cover parts of people's fields,
13 and I'm asking you if you took that into account when you
14 said there'd be no adverse impact?

15 MR. BELLINGHAM: We object to the question on the
16 grounds that it assumes facts not in evidence, and
17 move to strike the entire question relative to ice
18 down in the fields and so forth. There's absolutely no
19 evidence of any kind either in this proceeding or the
20 previous one.

21 HEARINGS EXAMINER: I don't recall that evidence.
22 Who introduced evidence of icing?

23 MR. GRAYBILL: It was one of my witnesses whose
24 name is --

25 HEARINGS EXAMINER: Okay, if he did, then he can
26 answer the question. Take less time to argue.

27 MR. BELLINGHAM: The witness' name was Mr. Graybill,
28 as I recall.

1 MR. GRAYBILL: Now, that's not so, Mr. Bellingham.

2 HEARINGS EXAMINER: All right, let's answer the
3 question, then, if he took into consideration any icing.

4 A I personally haven't taken into consideration icing in the
5 fields, if there is any increase in icing at all due to this
6 water.

7 Q Okay. Now, are you familiar with the fact that in the
8 springtime Armell's Creek floods?

9 A Yes.

10 Q Have you taken into consideration when you make the statement
11 that there will be no adverse impact as a result of surface
12 water runoff that in a flood situation if you add another
13 112 gallons per minute, you're going to automatically increase
14 the size of the flood? Did you take that into consideration?

15 A I believe that the flood runoff is depended upon by the
16 farmers downstream from the plant site in their normal
17 irrigation procedures.

18 Q Well, what made you believe that a farmer depends on a flood
19 to irrigate?

20 A Well, because we recently have walked that area and the
21 ditch system that some of the farmers down there have is
22 designed to spread that water in flood times.

23 Q In spring runoff whatever flooding there is going to be is
24 going to be increased, is it not, if your surge pond leaks
25 water into the creek?

26 A Yes, and I think the farmers depend upon that spring flood
27 runoff to help them with their hay crops.

28 Q I understand that you're expressing your opinion without

1 benefit of checking with the farmers, or knowing much about
2 farming, and I'm not really concerned about that. I'm con-
3 cerned about an answer to my question, which is, did you
4 consider that when you said there'd be no adverse impact,
5 or did you say that without thinking about this problem?

6 A I know I have gotten involved in the problem of flood runoff;
7 whether I applied it to this one-fourth of a second foot or
8 not I can't recall.

9 Q If more water runs down in the summertime than normally would
10 run down Armell's Creek because you pumped it up there and
11 it leaks --

12 A Incidentally, I should add this, that this water that's leak-
13 ing through the dam is caught in a catch basin and monitored,
14 and it's in existence on Units 1 & 2, and we have not deter-
15 mined how much it is or whether to allow it to continue to
16 flow into the creek or not, because it has some value to us,
17 and we may very well pump it back into the system.

18 MR. GRAYBILL: Now, I understand, Mr. Hearings
19 Examiner, that my question was interrupted and that he
20 added some more evidence which was not presented before,
21 and you know, I understand that at the time that Mr.
22 Berube testified about this it had recently been discov-
23 ered by the Bechtel engineers and that the Power Company's
24 engineers, and even Bechtel, apparently, before June the
25 14th of this year didn't even know it was going to leak.
26 I understand all of that, but I would like to have the
27 witness admonished to answer the questions and not add
28 evidence on his own, and I think we'll get the hearing

1 along faster.

2 HEARINGS EXAMINER: Is that a question?

3 MR. GRAYBILL: It's a question to you. Would you
4 mind admonishing him to answer the questions?

5 HEARINGS EXAMINER: Well, you ask the questions
6 and I'll see if -- if you want the answer stricken,
7 make a proper motion and I'll take it under suspicion.

8 Q Do you remember the question?

9 A No, I don't.

10 Q I didn't think so. The question is, if you run more water
11 down there in the summertime, for whatever reason, whether you
12 want it or don't want it, are you aware that that's going
13 to add to the marshiness and add to -- of the Armell's Creek
14 drainage, and it's going to cause certain areas which now
15 do not have water on them to have water and therefore grow
16 cattails and that sort of thing, in the meadows? Are you
17 familiar with that? Have you taken that into consideration
18 in making this statement that there's no adverse impact?

19 A In a general way I guess we've taken it into consideration.
20 Our conclusion is that adding water to Armell's Creek in the
21 summertime would be very helpful and that the people down-
22 stream would like it.

23 Q What study was that conclusion based on?

24 A No study, to my knowledge.

25 Q You didn't interview any of the farmers downstream?

26 A There have been some conversations with farmers downstream, but
27 I can't recall them specifically. I can recall that they
28 were talked to.

1 Q About these problems?

2 A About Armell's Creek and the effect of water in it.

3 Q Do you know who you talked to, when, and where?

4 A No, I can't recall.

5 Q Did it affect at all your decisions?

6 A No, I don't think there is any decision in this case that
7 we're talking about. As I've said, we've got some leakage
8 from the existing pond there, and we have visited with the
9 Health Department and the leakage as far as we know is
10 helpful in that it's better water quality than the water
11 that is in there now. If the Health Department or anybody
12 else has a different feeling, why, I'm sure if we know about
13 it we'll do something about it.

14 Q Sure, I'm sure you'd change anything that you had to to get
15 the plant built. The problem isn't whether you would change
16 it, it's whether you can or whether you planned the thing
17 properly in the first place.

18 A This is an existing problem.

19 Q No, there was no problem until you pumped the water up there,
20 Mr. Labrie.

21 A Well, but in referring to Units 1 & 2.

22 Q Now, I notice that you've added a page to your testimony
23 talking about Exhibit No. 104, and you say that costs have
24 escalated, and you put a \$40 million price tag on that.
25 I don't understand -- well, let me ask you this: After you
26 got the Bechtel report in June of 1975 about the possible
27 leakage in the surge pond and the sump ponds, which informa-
28 tion was later supplemented by a further Bechtel report, both

1 of which are in evidence in this case, and I'm sure you're
2 familiar with them, and both of which changed materially
3 the representation of the Westinghouse report that there
4 would be zero leakage from all of these ponds, what did you
5 do about that?

6 A I'm not sure I know which Bechtel report you're referring to.
7 I know what was done with the ponds.

8 Q I'm referring to Northern Plains Resource Council Exhibits
9 2 and 3. Now, No. 2 is a letter that you got on about the
10 14th of June, which I got from Mr. Berube on the stand one
11 time, which pointed out that there was a great deal of leakage
12 in the surge and sludge ponds, and then it said that there
13 would be a later report. Then on the 3rd of August you
14 delivered to the Board of Natural -- the Department of Health,
15 a report of several pages long -- I'd say about 30; 4 or 5 of
16 them in a letter and a supplemental thing that tells exactly
17 what Bechtel's engineers had discovered, and it discusses
18 the permeability; it discusses the cracks; and it discusses
19 what should be done in some senses, and I want to know what
20 you've done since you got those Bechtel reports about leaks
21 in the surge and sump ponds.

22 A You mean the surge and sludge ponds?

23 Q In all of your ponds.

24 A I can tell you what we've done about leakage. What I can't
25 remember is what's in the Bechtel report. Do you want to
26 hear about leakage, or shall I say I can't recall what's in
27 the Bechtel report?

28 Q I want to know what you've done as a result of the reports.

1 A Pardon?

2 Q I want to know what you applicants have done as a result of
3 your engineer telling you that these ponds, that many of
4 them will leak?

5 A I'll be happy to tell you what we've done about leakage, if
6 that's what you're asking. Is that what you want? Or do
7 you want me to try to relate what's in that Bechtel report?

8 Q I'll ask the question again, because it seems to be difficult
9 for you to understand.

10 A Yes, it is.

11 Q You applicants got some letters from Bechtel. They're in
12 evidence here. Now, if you want to stop and go get them
13 so you can read them, we can, but your counsel knows them
14 and I'm sure he's got a copy of them there if he wants you
15 to see them. Now, after you goet these letters which said,
16 in essence, that the surge and sump ponds were going to
17 leak a great deal more than the Westinghouse report had
18 said they were going to leak, what did the applicants do
19 about it?

20 A Well, if you're going to ask me to recall what's in these
21 reports, we'll have to go get them and we'll have to stop
22 and read them.

23 Q I don't know why you make it difficult for yourself.

24 A I don't remember what's in those reports.

25 Q I don't know why you make it difficult for yourself. What
26 I say is pretty straightforward English. I don't know
27 whether you're trying to delay me or whether you're trying
28 to confuse me, or what. I just want to know what you

1 applicants did after you got the reports. I've summarized
2 the reports for you. The reports say the sump pond and
3 the sludge ponds leak, or will leak, and I want to know
4 what you've done about it. Now, that's a pretty simple
5 question for an engineer.

6 MR. BELLINGHAM: I'll object to the question as
7 argumentative, and move that the entire question be
8 stricken.

9 HEARINGS EXAMINER: The question will be stricken.
10 Tell him what you've done about leakage. I think that's
11 what he wants to know.

12 A All right. I think this was in testimony by Dennis McMillan,
13 but starting with the retention ponds that are behind the
14 power plant, there are six retention or surge ponds behind
15 the power plant of one sort or another, and these have been
16 lined in order to minimize leakage.

17 Q Can I stop you there? How do you line a pond?

18 A We line a pond with about three foot of a silty clay material,
19 as I recall, and this was done this summer and it cost just
20 under a million dollars. Now, in addition to that, we built
21 two brine concentrator ponds and these ponds have highly
22 dissolved solids in them, so that we have put in a rubber
23 lining so that there's no leakage in those two particular
24 ponds. In the area of the surge pond which has Missouri
25 River water --

26 Q Pardon me, let me stop you there. You put a rubber lining
27 somewhere?

28 A I believe it's rubber. It's some material similar to that,

1 and it does not leak at all.

2 Q And that's different from the silt lining that cost a million
3 dollars?

4 A Yes, it is.

5 Q How much did the rubber liner cost installed, and with all
6 the work connected with it?

7 A I don't recall.

8 Q Do you have any rough idea?

9 A No, I -- if I say a number and it's totally wrong, why --

10 Q All right, I don't want you to say a number that's totally
11 wrong, I'm just trying to find out what it cost.

12 A I don't recall.

13 Q Let's go to the surge pond now.

14 A All right. The surge pond, of course, has Missouri River
15 water in it, and what we in effect have done is create a
16 lake there. There's some leakage there. We've done a
17 considerable amount of grouting to control this leakage,
18 and the rest of it we have caught in drain pipes, and this
19 is normal with any reservoir of this type, that you will have
20 a certain amount of leakage, and the channel leads to a weir where
21 we can measure it and at the present time it is going into
22 Armell's Creek. This is what I believe he said was 112
23 gallons a minute, and I believe the last time we read the
24 weir it was 30 gallons instead of 112, so we've done a con-
25 siderable amount of controlling of the leakage from that pond.
26 There will be some leakage.

27 Q Are you certain about that?

28 A About the 30?

1 Q About the readings, yes.

2 A This last reading, I believe that was true, but we weren't
3 to full head yet, so I don't know what the leakage at that
4 point is going to be.

5 Q You really don't know what the pond's going to leak, then,
6 do you?

7 A No, and the estimate is 112.

8 MR. GRAYBILL: Mr. Hearings Examiner, this has
9 been a crucial point throughout. I'd like to have his
10 testimony stricken. He read a number in which he now
11 admits he doesn't know will be the right number. I'd
12 like to have it stricken so we're not bothered with it
13 later in the record.

14 HEARINGS EXAMINER: Denied. He testified to 112
15 and that's without a full head on the pond, and then
16 the present that he's talking about is 30.

17 MR. GRAYBILL: That 112 has nothing to do with a
18 full head on the pond, that was an estimate of what
19 it would be from the engineers. Now, we either have to
20 understand the evidence or not, sir, and now he's come
21 in and tried to change it in the record from 112 to 30,
22 and he admits that it isn't full and he's not sure,
23 and you're going to let it stand in the record.

24 HEARINGS EXAMINER: I'll let it stand. The
25 record will speak. You can ask him further questions
26 about it.

27 MR. GRAYBILL: I'd like at this point in the record
28 to show that I think it's unfair that --

1 HEARINGS EXAMINER: We don't need you to show
2 what's unfair. You can put that in your brief to the
3 Supreme Court. You don't need to argue with the rulings.
4 You can argue with the witness if you want, but --

5 MR. GRAYBILL: Okay, I guess I got it in the record.
6 Thank you.

7 HEARINGS EXAMINER: It's in the record.

8 Q All right, now, how much did it cost you to grout and put
9 in the drainpipe on the surge pond?

10 A I think all the grouting that we've done since the initial
11 foundation work would run about \$200,000.

12 Q So that's how much you've spent on the surge pond?

13 A Yes, as I recall.

14 Q I understand that we're going on your recollection. All
15 right, now, then, there's a sump pond up there behind the
16 surge pond that we haven't dealt with yet. What about it?

17 A The evaporation sludge pond disposal area, the foundation for
18 that dam has been prepared and grouted and a cutoff wall
19 put in. The chesting of the reservoir area is mostly complete
20 and the intention is to move overburden material around in
21 the sludge pond area to the extent that there is seven foot
22 of cover over the sandstone bedrock all over the area, and
23 all of these details have been gone over in depth with the
24 State Water Quality Bureau of the Department of Health, and
25 they've been out there and we've taken them around and shown
26 them these activities.

27 Q Now, let me ask you this: When the Westinghouse report said
28 there was zero leakage, did you plan to do all of that work?

1 Did you plan to put that big trench in and the cement
2 retaining wall under the dam and so on?

3 A The work that was done in the surge pond under the dam and
4 so on is the normal course of engineering work that you do
5 as you go along if you find out that you need to do it.

6 Q When did you find out that you needed to do it?

7 A In the course of building the dam.

8 Q When was that?

9 A This would have been last year and the year before.

10 Q I am talking about the sump pond now, the ash disposal pond.
11 There's a big trench that's been dug there and a big retain-
12 ing wall built which you've shown us. When did you decide
13 to do that?

14 A The retention ponds, are you referring to? Behind the plant?

15 Q The ash disposal retention ponds.

16 A Bechtel made an estimate of the leakage, and this was
17 presented to the Water Quality people last spring, and then
18 on the basis of those numbers, why, in order to be darn sure
19 that we didn't exceed them, we went back in last summer and
20 put this liner in.

21 Q Now, Mr. Labrie, there's been testimony here by the Water
22 Quality people themselves that they had no knowledge at all
23 from your people of any leakage from any ponds, and that
24 they presumed they were zero as the Westinghouse report said
25 until the June 14th letter, so when you say that you told
26 them last spring there was going to be leakage, I must suggest
27 to you that your timing might be off, because there's sworn
28 testimony from those people that they didn't know anything

1 except zero leakage until June 14th. Now, would you like
2 to reconsider that answer, or do you want to maintain that
3 answer against that other evidence?

4 A I think we're debating about a 30-day period, and I can't
5 tell you without going back, and even then I'm not sure that
6 I can. I know that I personally went over and met with Don
7 Willem's and Max Botz prior to the time that they testified,
8 and went over the thing in detail, and then we had a second
9 meeting, and this was also prior to their testimony. Now
10 when that was relative to June 14th I'm not positive.

11 Q How much did it cost you to remodel the ash pond, then, by
12 putting this work in that you discovered as you went along,
13 in the late spring?

14 A This hasn't been done yet completely, and I have no idea.

15 Q You mean as an engineer you didn't estimate what it might
16 cost to do this before you started to work?

17 A You mean to rebuild the ash pond or to remodel it? My
18 difficulty is that I don't know how to answer your question,
19 because we hadn't started building the ash pond in the first
20 place. What we did was to sit down this past year and set
21 down the design criteria, and that design criteria included
22 the -- covered what we're talking about.

23 Q Well, I'll try and help you if you'll let me. Now, I presume
24 that you did some engineering on this plant before you even
25 wrote the Westinghouse report and certainly before your
26 application, because your application contains some numbers
27 as to what it was going to cost, so someone asked some
28 engineers what it was going to cost initially, and then you've

1 now testified that as the work progressed this last spring
2 and as we found out that the leakage wasn't zero but was
3 substantial, that other things were done, and I'm trying to
4 find out the costs of the changes from your initial estimates
5 when the application was made until now, that were caused
6 in the sump pond and in the surge pond and in these other
7 places.

8 A The initial estimates of Colstrip 3 & 4 did not contain
9 detail in them whereby I could tell you what the ponds would
10 cost.

11 Q You mean that there was no cost for the ponds in the initial
12 estimate?

13 A That's correct. What there were was a scale up of Units 1 &
14 2, the initial estimates for 3 & 4 were. And to the extent
15 that there were ponds for 1 & 2, why, it hasn't been split
16 out to try and determine what scale up would be involved to
17 get to the cost of 3 & 4 ponds, so I don't know that,
18 actually.

19 Q And actually, there weren't any ponds constructed in 1 & 2
20 at the time that you made your application, were there?

21 A No, I don't think so.

22 Q So the fact is that you really didn't have any ponds costs
23 at all in your initial application estimate?

24 A I believe in the 1 & 2 estimate there were some ponds included
25 in the cost estimate, as I recall.

26 Q That was assuming leakage at zero, as the Westinghouse report
27 said?

28 A Westinghouse made the statement that the leakage would be

1 zero, which, of course, is essentially impossible. The
2 leakage is insignificant and there's been considerable
3 testimony along these lines.

4 Q As an engineer is it possible for you to tell me how much
5 more the surge ponds and the waste disposal ponds have cost
6 you than you thought they were going to cost you when you
7 made the initial estimate for the application?

8 A Yes, because I didn't have the initial ponds separated out
9 from the original estimate, so as an engineer I can't tell
10 you how much more the ponds cost now. I believe that we
11 probably have an estimate for how much the ponds cost now,
12 but how much more than the initial estimate, I can't tell
13 you.

14 Q Will you ever be able to tell me?

15 A No. I think the original estimate envisioned a different
16 pondage arrangement entirely than what is applicable.

17 Q Your supplemental statement has a lot of figures here at the
18 bottom. Do the figures for the changes in the ponds appear
19 in any of those numbers at all?

20 A No.

21 Q No?

22 A Not per se, no. They are in the total cost estimate, which
23 is the \$776,000,000, but they're not on this sheet of paper.

24 Q Isn't the 776 gotten by adding these figures on the sheet
25 to the 669?

26 A That's correct.

27 Q Well, I want to know what one of these categories the costs
28 of the -- you just said that silt lining one set of ponds cost

1 a million dollars. Now where is that million? Is it in
2 escalation for one year? Is it in basic scrubber decrease?
3 Is it in addition of wash trays? Is it in labor increase?
4 Where is it?

5 A It's not in any of those things.

6 Q Then if that's the case, these figures don't really show the
7 total cost of the plant, do they?

8 A No, except to the extent that the 669 had in it a dollar
9 figure for ponds, which apparently was adequate in Bechtel's
10 viewpoint.

11 Q But you certainly have admitted now that you have now silt
12 lined the ponds for a million dollars that you surely didn't
13 intend to do initially?

14 A Yes.

15 Q So may we add a million dollars, and would that make it right?
16 Or don't you know?

17 A I believe there was an allowance, as I recall, and there's a
18 great number of figures in that 776 and the 669. As I recall,
19 I believe there was an allowance for ponds, so apparently it
20 was adequate to cover the lining.

21 Q But you don't know whether it covered the lining or not?

22 A Not without making a detailed check to find out what our
23 current estimate of the ponds is relative to what's in the
24 Bechtel estimate.

25 Q All right, I think you've demonstrated for me in answer to
26 my questions what you know about it, Mr. Labrie, and I thank
27 you.

28 MR. GRAYBILL: I have no further questions.

1 HEARING EXAMINER: Redirect?

2 MR. BELLINGHAM: May we have a few minutes' recess?

3 HEARINGS EXAMINER: All right, let's take a 10-
4 minute recess.

5 (BRIEF RECESS, 2:55 P.M.)

6
7 * * * * *

1 Following a brief recess, the hearing reconvened at 3:15 P.M.
2 on January 20, 1976.

3 HEARINGS EXAMINER: Are you ready to proceed?

4 MR. BELLINGHAM: The applicants are ready, sir.

5 HEARINGS EXAMINER: All right, you can proceed
6 with your redirect. Yes, sir?

7 MR. SHENKER: I didn't want to interrupt the fascinat-
8 ing discussions that were going on the in the previous
9 pieces of cross-examination, but there was one matter on
10 which I think I should make a statement for the record.
11 With respect to the study of Peter Edmons, who was a
12 listed witness for the applicants, I assume that Mr.
13 Labrie and Mr. Bellingham and Mr. Peterson will make
14 every effort to promptly produce that study, but the
15 record should show that Mr. Edmons was deposed in
16 Pittsburg, Pennsylvania, in advance of the commencement
17 of this hearing, in April of 1975. Mr. Edmons at that
18 time was still working on some of his findings and had
19 undertaken to make available to counsel who were taking
20 his deposition the results of that further work. If
21 the study to which Mr. Labrie now refers is indeed the
22 results of that earlier work, we are absolutely entitled
23 to receive that information, and I am surprised that we
24 have not received this to date. My assumption was that
25 there was no further product from the work of Mr. Edmons,
26 or surely we would have received it by now. If one reads
27 the statement of testimony of Mr. Edmons one finds no
28 reference to the study, nor to any other study, for that

1 matter, by anybody. There are no literature references
2 anyplace in that statement of testimony of Mr. Edmons,
3 so I regard it of some importance in terms of keeping
4 faith with discovery, as well as proper preparation for
5 cross-examination of Mr. Edmons, which I assume will be
6 next week, that we do receive the copy of that study at
7 the first available moment.

8 HEARINGS EXAMINER: Who wants to respond? Mr.
9 Peterson?

10 MR. PETERSON: The study that was alluded to on the
11 examination of Mr. Labrie is included in the testimony
12 of Mr. Edmons. As his testimony developed he prepared
13 and documented in his testimony all of the work which he
14 has done on the project for Colstrip for the purposes of
15 this hearing, and all of the matters are in his testimony.
16 There is no written study independent of that testimony.

17 HEARINGS EXAMINER: Well, I guess that answers both
18 yours and Mr. Graybill's question.

19 MR. SHENKER: Yes, that clears it up for me. There
20 simply is no other study. Thank you.

21
22 CONTINUATION OF EXAMINATION OF ROBERT LABRIE

23 Redirect, by Applicants

24 By Mr. Bellingham:

25 Q I have just a question or two, Mr. Labrie. Now, then, in
26 your written testimony you've indicated why Colstrip Units
27 3 & 4 have been rescheduled on two distinct occasions, have
28 you not?

1 A Yes, I have.

2 Q Insofar as your prime contractor, Bechtel, is concerned,
3 who dictated to them any schedule changes?

4 A I did.

5 Q Did they have any input into schedule changing?

6 A No, only in the sense that they produced the time requirements
7 to construct the plant; in other words, the construction
8 schedule.

9 Q Insofar as the policy determination scheduling and postpone-
10 ment, did Bechtel have anything to do with the final decision
11 on that?

12 A No.

13 Q Did you convey to Bechtel the delay in scheduling that you
14 have previously testified to?

15 A Yes.

16 Q And did you give them at that time any reasons for the delay?

17 A Yes, the reasons for the delay, and the only reasons for the
18 delay that I had any knowledge about, and I'm the only one
19 that talked to them, to my knowledge, was that it was no
20 longer possible or practical to complete the unit on the
21 construction schedule that they were proposing, so we had to
22 set a new target, which was a year later.

23 Q Did you give them reasons for the slippage?

24 A I'm sure that I said essentially this, that it's obvious that
25 we can't meet the schedule requirements for 1978 units, so
26 we'll have to make it 1979, and then when we delayed it
27 that time, the same thing, to 1980.

28 Q Did you give them the reasons you testified to in your written

1 statement at the time that you told them about the schedule
2 changes?

3 A I presume that I did, yes.

4 MR. GRAYBILL: I make a motion that that answer
5 be stricken; it's not definitive.

6 HEARINGS EXAMINER: Would you repeat the question
7 and answer, please?

8 Q Did you give them any reason for it as in your written
9 statement as to why the schedule had been postponed?

10 HEARINGS EXAMINER: Was that your question?

11 MR. BELLINGHAM: Yes.

12 HEARINGS EXAMINER: And his answer was "Yes, I did?"

13 MR. GRAYBILL: No, that was not his answer.

14 HEARINGS EXAMINER: What was his answer?

15 MR. GRAYBILL: "I presume I did."

16 HEARINGS EXAMINER: All right, it can be stricken.

17 He can state whether he did or he didn't.

18 Q Did you or did you not, to the best of your recollection?

19 A To the best of my recollection, we discussed the fact that
20 it was no longer possible to meet the schedule that had
21 previously been made out, so a change was required, and as
22 long as there was going to be a change, it would be to a year
23 later.

24 Q Did you ever tell them, indicate to them, that the delay may
25 have been caused by financing?

26 A No, sir.

27 Q I should say financing problems, on behalf of any of the
28 applicants?

1 A No, sir.

2 Q Did you ever indicate to them that the delay may have been
3 caused because of a decrease in the forecasted loads of any
4 of the applicants?

5 A No, sir. I did have a discussion with Chuck Hochgesang one
6 time, and apparently he wrote a memo which certainly distorts
7 my off-the-cuff opinions that were made at that point in time.
8 This was considerably before we actually officially delayed
9 the schedule, that there were other problems in the area. At
10 no time when I actually directed Bechtel to slip the schedule
11 did I give them any reason other than the fact that it was
12 no longer possible, and at no time did anybody in my company
13 or in any of the other participants direct me to so do.

14 Q Who is Chuck Hochgesang?

15 A Chuck Hochgesang was the manager of the project during the
16 first schedule slippage.

17 Q On behalf of whom?

18 A For Bechtel Corporation.

19 Q Turning briefly to the site selection for Units 1 and 2, were
20 there studies made regarding the various alternative locations
21 or possibilities?

22 A Yes.

23 Q Were these in writing?

24 A Some of them, yes.

25 Q Do you have any idea how many of them may have been?

26 A You're referring to in-state studies, or out-of-state?

27 Q Yes, on site selection, for 1 & 2.

28 A I believe in my testimony I mentioned these sites that we

1 studied.

2 Q My question was, were there written studies made on these
3 sites?

4 A There was some writing, yes.

5 Q And at the time that you looked at the various alternative
6 sites for 1 & 2, there were writings prepared regarding
7 these various selections, is that right?

8 A Yes.

9 Q You were asked a series of question by Mr. Meloy regarding
10 the environmental factors that were or were not considered
11 in your site selection. Do you recall that cross-examination?

12 A Yes.

13 Q And the various studies that you prepared regarding the
14 site selection, do you recall that?

15 A Yes.

16 Q Most of the studies that he referred to involved economics,
17 as far as the studies are concerned?

18 A That's right.

19 Q Now, then, were environmental considerations gone into and
20 weighed when you selected or looked at these various sites?

21 A Yes.

22 Q Turning first to page 2 of your written statement, line 25,
23 we're referring there to the Townsend site, are we not?

24 A That's correct.

25 Q And what environmental factors were decided at that time
26 relative to the Townsend site?

27 A Well, there were two principal ones, and that was that we
28 had intended to use the Canyon Ferry Reservoir as a cooling

1 pond, and we thought that due to its excellent fishing
2 conditions it would be difficult to follow this plan. The
3 other one was that we were concerned with the possible
4 heavy inversion situations in this area, from an air pollu-
5 tion point of view.

6 Q Turning next to the Clarkston site, page 3, line 8, I don't
7 think we need to go into that in any detail in view of the
8 extended discussion you had with Mr. Meioy, but as far as
9 the Clarkston site is concerned, your environmental concern
10 there was what?

11 A It was air pollution due to the deep valley situation.

12 Q And what about the Trident-Three Forks area, also referred
13 to on page 3?

14 A This area, at the time Ideal Cement Company was a fairly
15 heavy polluter in the area, so we were concerned about the
16 existing pollution, and in addition to that the fact that
17 it would be upwind from the town of Bozeman, and Bozeman
18 is in a basin, so we thought that in inversion situations
19 our effluents from the plant would be carried into that area,
20 creating air pollution difficulties.

21 Q Now, then, what is the next site?

22 A Livingston, and we viewed that as a rather good one from the
23 air pollution point of view, because there was flat terrain
24 and the wind disperses the pollutant pretty well.

25 Q And the next site I think you looked at was the Cushman area
26 site. What were the environmental concerns there?

27 A We couldn't see any difficulty with the Cushman area, except
28 that there appeared to be a shortage of water, so that this

1 might degenerate into an environmental problem if we were
2 able to obtain water rights and take them away from the area.

3 Q What about your air pollution control in that area?

4 A Air pollution in that area looked fairly good, because it
5 was a flat plain where the terrain was reasonably level and
6 prevailing winds would carry the -- disperse the pollutants
7 well.

8 Q You state at line 18 that you considered the area good from
9 an environmental standpoint, is that right?

10 A Right.

11 Q For the reasons given previously?

12 A Yes.

13 Q And then at page 5, relative to the Colstrip site, line 14,
14 did you analyze the environmental factors between the Colstrip
15 and the Nichols site?

16 A Yes. We were concerned at Nichols, with the ascetics of it,
17 we thought it was less desirable to have a plant located
18 along the interstate highway than it would be back in the
19 country, number one; and number two, we were somewhat con-
20 cerned that the cooling towers in that area might cause
21 icing. There wasn't too much room in which to locate the
22 cooling towers, and we thought that might be a difficulty
23 on an interstate highway system.

24 Q And I think your statement itself relative to Colstrip is
25 what?

26 A Colstrip, we couldn't see any disadvantages environmentally
27 with locating a plant in that general area.

28 Q Insofar as this last winter is concerned -- that is the

1 winter of '75 and '76, what kind of weather conditions has
2 Montana Power experienced in the area of the State of Montana
3 that's serviced by it?

4 A Well, in the November-December time period it was fairly mild
5 so that we wouldn't expect to see any system peak load that
6 would be as heavy as any more adverse or colder situation.

7 Q What about the water conditions?

8 A The water conditions were quite good, and because of that we
9 had more water than critical and could generate more power.

10 Q This is in your hydro sites?

11 A Yes.

12 MR. BELLINGHAM: No further questions.

13 HEARINGS EXAMINER: Go ahead and re-cross, Mr. Shenker.

14
15 Re-cross, by Department of Natural Resources and Conservation

16 By Mr. Shenker:

17 Q Mr. Labrie, rather than going back into the extent of your
18 massive consideration of environmental factors on the alter-
19 nate sites that preceded Colstrip 1 & 2, we, sir, now have
20 for more than a year been involved in the rather intensive
21 rummaging through your files by discovery process, interrogator-
22 ies, depositions, and production. Would you be kind enough
23 to produce for us a single scrap of paper, anyplace ever, in
24 which you recorded a single environmental consideration on
25 any of the alternate sites prior to Colstrip 1 & 2?

26 A I will have to search my file to find out if there are any.
27 I don't know.

28 Q Thank you, sir. I may assume and the record may assume that

1 the nonproduction of that material means that there aren't
2 any.

3 MR. BELLINGHAM: I don't think that the record
4 should show that at all. If we find any papers relative
5 to it, we'll turn them over to you. Other than that --
6 I'll say nothing further.

7 MR. SHENKER: Well, if you have papers, you're
8 going to turn them over. If you don't have papers,
9 the record will show that, won't it?

10 MR. BELLINGHAM: But I don't think your comments
11 on what the record means in the absence or in the
12 presence of production has any place in the record.

13 HEARINGS EXAMINER: Do you have any further questions?
14 I guess you've all got the record recorded.

15 MR. BELLINGHAM: More than adequately, I would say.

16 HEARINGS EXAMINER: Do you have any further redirect?

17 MR. SHENKER: Yes, I thought I'd ask him some
18 questions now, if I might. Do you have something further
19 to say, Mr. Bellingham?

20 MR. BELLINGHAM: No, I finished it, not because Mr.
21 Graybill pointed his finger at me, but because I was
22 through.

23 HEARINGS EXAMINER: All right, it's getting close
24 to 4:00.

25 Q (Mr. Shenker continuing) You've known Chuck Hochgesang a
26 long time, haven't you?

27 A Yes, I have.

28 Q He's been the Bechtel representative here in the Pacific

1 Northwest, it's his territory -- as a matter of fact, he was
2 the first contact man between Bechtel and the Montana Power
3 Company, isn't that right?

4 A That's right. He was their sales representative.

5 Q Right, and that was true at the time that you made the
6 decision to go ahead with the Corette Station, he had to
7 maintain contact with you fellas, isn't that true?

8 A Yes.

9 Q Yes. Is it your experience, generally, in your dealings with
10 Mr. Hochgesang that he made a practice of misconstruing what
11 you said?

12 A I would say so, yes.

13 Q He's pretty good on misconstruing your statements?

14 A Yes, I think he is.

15 Q Right. Didn't you tell him from time to time, "Hey, Chuck,
16 stop misconstruing my statements"?

17 A Yes, but I wasn't privy to his interoffice memos, or I'd
18 have told him a lot stronger.

19 Q Well, you finally got privy to them back in May of last year
20 when you got copies of the same material we got copies of
21 from Bechtel, right?

22 A Right.

23 Q And at that point, Mr. Labrie, did you write a correcting
24 memorandum to Mr. Hochgesang or the Bechtel Power Corporation
25 in order to explain the inaccuracy of their records?

26 A No, I did call them up and discuss it with Mr. Hochgesang
27 and also with several other people in the Bechtel organization,
28 and informed them that I had no knowledge that that memo

1 reflected my thoughts at that point in time at all.

2 Q I think the record knows, and I personally do, of course,
3 Mr. Labrie, that you were a man of discretion, and you would
4 not, of course, have told the Bechtel Power Corporation that
5 they should be directed to defer the scheduling for the
6 Colstrip Units because the utilities here couldn't afford
7 it. That would be a rather indiscreet thing to say, wouldn't
8 it?

9 A Well, I don't know. If we were delaying a plant for financial
10 reasons, why, I would think it would not be inappropriate at
11 all to tell them so.

12 Q Really? Is that the sort of thing that you'd want known,
13 when your bond ratings might be conditioned on the ability
14 of the utility to obtain financing?

15 A I have no idea, but as I have testified, Mr. Shenker, I
16 absolutely never had any knowledge that there was any reason
17 whatsoever to delay these plants at all, and the only reason
18 that they were delayed was by virtue of the fact that the
19 time went by and it just wasn't possible to build them, and
20 that's a fact and that's all there is to it.

21 Q And a year and a half after you've made an application for
22 the Colstrip Units on a presumed need, based upon a load
23 forecast that came from you and your fellow applicants, it
24 would have been indiscreet then to have told the Bechtel
25 Power Corporation, "Hmph, those forecasts don't support our
26 request for these units at all," wouldn't it?

27 A I didn't follow your statement. I'm sorry. Would you repeat
28 it, please?

1 Q Yes. A year and a half after you'd filed your application
2 for the Colstrip Units, based upon load forecasts produced
3 by you and your sister applicants, it would have been rather
4 indiscreet again to have told Mr. Hochgesang of Bechtel, "It
5 looks like we've bungled on our load forecasts and we don't
6 need the plants, after all." You wouldn't say a thing like
7 that, would you?

8 A I probably would.

9 Q Would you now?

10 A Yes. If such were the case. Chuck and I are quite frank
11 with each other in our dealings.

12 Q In the frankness and candor of the relationship that you had
13 with Mr. Hochgesang, did you know that he was making memoranda
14 of your conversations?

15 A No, although I should have suspected it, because Chuck's
16 previous job, and he really never let go of it, was as a
17 sales representative, so he will pick up bits and pieces of
18 information from all over and try and pass on any story that
19 he could that would be helpful to his company from a sales
20 point of view.

21 Q Sure, and of course, he also has some journalistic experience,
22 he was a writer within the utility industry, wasn't he?

23 A That's right, yes.

24 Q How do you think it helped Bechtel for him to have reported
25 to the Bechtel files -- the memorandum, by the way, was
26 addressed to "Files" --

27 A It was what?

28 Q His memorandum was addressed to "Files." That seems to be

1 the recipient of most of the memoranda for Bechtel. How
2 do you think it helped Bechtel for his memorandum of your
3 telephone conversation to record the fact, as he understood
4 it, that your financing problems and load forecasts meant
5 that you would have to defer? How did that help Bechtel?

6 A I don't recall the memo, as I've said earlier, but did he
7 relate to our financing problems and our load forecasts?

8 Q Those utilities that were the applicants.

9 A I don't know. Like I say, I had no basis for knowing the
10 specific financing problems of any of the other applicants,
11 and I had no access to the load forecasts at this point in
12 time. There wasn't any reason why I should be giving him
13 specific information of this order.

14 Q What you do remember is that you had had a telephone conver-
15 sation with Chuck Hochgesang?

16 A Very definitely.

17 Q And in the course of the conversation you did discuss with
18 him in a very general manner questions of loads and resources
19 and financing, you remember that, don't you?

20 A I must have said something in order for him to write that
21 memo, but I can't tell you exactly what.

22 Q But what you do specifically tell us for the record now is
23 that you did not "direct" Bechtel to defer the project because
24 of those reasons?

25 A Absolutely. This I am positive of.

26 Q Yes, that part we understand, Mr. Labrie.

27 MR. BELLINGHAM: May we inquire the date of the
28 memo that Mr. Shenker's referring to?

1 MR. SHENKER: The same date that it's been all
2 along, Mr. Bellingham, September 10th, 1974. It is
3 an exhibit in the previous proceeding before the Board
4 of Health and Environmental Sciences.

5 Q Mr. Labrie, while there may not be in the record, and we will
6 find out, any written record of the environmental studies you
7 may have made of alternates to the Colstrip Units 1 & 2,
8 do you recall the phrase "minimum adverse environmental
9 impact" ever having been used in connection with the study
10 of any of the alternate sites?

11 A I don't think so. Not back in 1970.

12 Q That's a phrase that was introduced by the Utility Siting
13 Act of 1973, right?

14 A I presume so, yes.

15 Q Sure, so after that Act was passed and you were looking at
16 the Colstrip Units 3 & 4, you didn't back up at that point
17 and consider what the alternatives might have meant to you in
18 terms of the minimum adverse environmental impact, did you?

19 A No, we didn't. We retained Westinghouse Environmental Systems
20 to make a study for us.

21 Q You had retained them before the Utility Siting Act was
22 passed, hadn't you?

23 A Yes.

24 MR. SHENKER: Thank you. That's all.

25 HEARINGS EXAMINER: Any other re-cross? (No response)

26 There are no further questions. While this gentleman is
27 on the stand we have some exhibits. Did you want to
28 make any objections to the exhibits, Mr. Shenker?

1 MR. SHENKER: I have looked at all the exhibits
2 Mr. Bellingham wanted to introduce through this gentle-
3 man and I have no objections to any of them.

4 HEARINGS EXAMINER: All right. Now, Exhibits 14,
5 15, 16, 17, 17-A, and Exhibit 104 will be admitted.
6 He also offered Exhibit 119. If you want to have any-
7 thing specific directed to that, I'll submit it in
8 evidence at this time, which I reserved a ruling on last
9 May.

10 MR. SHENKER: We've had a good deal of discussion
11 on that one, and as a result of the hearing before the
12 Board of Health and Environmental Sciences, it is now
13 incorporated into this record, so it's my view the
14 foundation has certainly been laid under the more relaxed
15 rules that we apply in this proceeding. I have no
16 objection.

17 HEARINGS EXAMINER: No objection -- very well, the
18 exhibit will be admitted. At this time I would also
19 like to get the record straightened out, to put in
20 DNR Exhibit NO. 9, which has been discussed between
21 counsel, or various of the counsel, and it was missing
22 before, but let the record show DNR Exhibit No. 9 is
23 admitted.

24 MR. BELLINGHAM: Sir, may I address myself to that
25 exhibit very briefly? There's one problem in connection
26 with it, and I assume that somewhere along the line that
27 this must be the exhibit, but I have been unable to find
28 anywhere in the transcript where Exhibit No. 9 was

1 identified, and Don indicated before that he couldn't
2 find it.

3 MR. SHENKER: We found it. I don't have it out
4 here right now, but I'll give it to you later.

5 HEARINGS EXAMINER: Well, let's look at that later.
6 Let's go to our next witness. If there is any problem
7 I know where it is. It's admitted.

8 MR. BELLINGHAM: The Applicants will call David H.
9 Knight.

10
11 DAVID H. KNIGHT, called as a witness by the Applicants, having
12 been duly sworn upon his oath, both as to his written direct
13 testimony and as to the oral testimony to follow, was examined
14 and testified as follows:

15
16 (THE WRITTEN DIRECT TESTIMONY OF MR. DAVID H. KNIGHT WAS
17 DIRECTED TO BE INSERTED AT THIS POINT.)
18
19
20
21
22
23
24
25
26
27
28

1 Testimony of
2 DAVID H. KNIGHT
3

4 I am David H. Knight, Vice President - Power Supply
5 for Puget Sound Power & Light Company, 10608 N.E. 4th, Bellevue,
6 Washington 98009.

7 I am the Company officer responsible for the operation
8 of the Company's generation and for all matters of bulk power
9 supply, sales, transfers and interchanges of energy between
10 Puget Power and other utilities, and coordination of Puget Power's
11 operations with those of other utilities. In this capacity
12 I will be testifying to Puget's existing and projected power
13 supply situation, especially as to Puget's need for Colstrip
14 Units 3 and 4. In conjunction with this testimony, I will be
15 referring to various exhibits, which were prepared under my
16 supervision, direction and control and which are true and correct.

17 We had prepared and circulated to the parties similar exhibits
18 when these proceedings got under way last spring. Those earlier
19 exhibits are now out of date and the new exhibits in regard to
20 which I will be testifying contain more current information.

21 I received a Bachelor of Science degree in electrical
22 engineering from Washington State University in 1947. In August
23 of 1947 I joined Puget Power as a student engineer, becoming
24 its Intercompany Pool representative in Spokane beginning in
25 May of 1948. I next moved to Puget Power's Power Systems Opera-
26 tions Department in Bellevue after nine years in Spokane and
27 from November 1958 to August of 1969 I was Manager of the Power

1 Systems Operations Department. In August of 1969 I became Vice
2 President-Power Supply.

3 I am a member of the Pacific Northwest Coordination Agreement
4 Committee and served twice as its Chairman, a member of the
5 Operating Committee of the Northwest Power Pool, on the Council
6 and Executive Committee of the Western Systems Coordinating Council,
7 a member of the Board of Trustees of the Canadian Storage Power
8 Exchange, and a member of the Engineering Advisory Board of
9 Washington State University. I have served as a member of the
10 Load and Resources Committee of the PNUCC since 1958.

11 Puget is an investor-owned utility whose stock is traded on
12 the New York Stock Exchange and which has stockholders in every
13 state in the United States and many foreign countries. The
14 Company's service area lies within nine counties in western
15 Washington with a population totaling over one million. The
16 Company has a large percentage of residential customers and a
17 relatively small percentage of industrial customers. As of
18 November, 1975, Puget had 426,540 customers consisting of 386,333
19 residential, 38,116 commercial, 511 industrial and 1,580 other
20 customers. For the twelve months ended November 30, 1975,
21 approximately 55.0 percent of Puget's net electric revenues were
22 derived from residential service, 27.8 percent from commercial
23 users, 10.2 percent from industrial users, and 7.1 percent from
24 others.

25 Applicants' Exhibit No. 18 shows the historic peak and
26 average energy loads on Puget's system as well as a forecast of
27 future loads. In regard to peak loads, Exhibit No. 18 indicates

1 that since 1960 Puget has experienced actual peak load growth
2 averaging 8.1 percent per year. In regard to energy loads,
3 Exhibit No. 18 indicates that since 1960 Puget has experienced
4 an average energy load growth of 8.2 percent per year, exceeding
5 the Northwest average of 6 percent and the national average of
6 about 7 percent. Exhibit No. 18 shows some flattening of the
7 energy curve about 1973. It was in that year that adverse hydro
8 conditions caused utilities in the Pacific Northwest to initiate
9 an intensive program of power conservation. While this program
10 was underway, a national energy conservation effort went into
11 effect which continued during 1974. In contrast to zero, or
12 negative, load growth which many electric utilities experienced
13 during this period, Puget's actual energy load increased in 1974
14 by 2.8 percent over 1973 (3.1 percent on a weather adjusted basis).
15 In the twelve months, December 1974 through November 1975, there
16 has been even more significant growth with a rate of 7.1 percent
17 higher energy loads over the preceding 12 months (5.8 percent on
18 a weather-adjusted basis). Through the mid-1980's it is estimated
19 that the energy load on Puget's system will increase by about six
20 percent a year.

21 The estimated future loads shown on Exhibit 18 were determined
22 in Puget's most recent load forecast which was prepared in the
23 fall of 1974 by the Company's Marketing and Rates Department. In
24 making this forecast, Puget used a detailed statistical approach
25 modified by judgment as to the effects of known or unusual new
26 loads, economic conditions, population figures and other factors.
27 Sole reliance on statistics or historic data would not be prudent.

1 This forecast was then adjusted by my department for losses and
2 used to determine the monthly energy loads. The peak and energy
3 loads beyond the initial 12-year period, and up to 20 years, were
4 determined by trending.

5 Applicants' Exhibit No. 18A shows the generating facilities
6 in which Puget presently has an ownership interest. The exhibit
7 indicates that Puget currently owns generating facilities with
8 a total net plant capability of 757.5 megawatts. I should add
9 parenthetically that Exhibit No. 18A shows the plant capabilities
10 in kilowatts and these figures can be converted to megawatts by
11 dividing the number of kilowatts by 1,000. The facilities listed
12 on Exhibit No. 18A consist of six hydro plants with a total net
13 plant capability of 309.9 megawatts, one oil-fired thermal plant
14 with a net capability of 85.8 megawatts, one internal combustion
15 unit with a net capability of 2.85 megawatts, two combustion turbines
16 with a net capability of 96 megawatts, a 50 percent interest (165
17 megawatts) in the 330 mw Colstrip Unit No. 1, operated by the
18 Montana Power Company, and a seven percent interest (98 megawatts)
19 in the 1,400 megawatt Centralia plant (an existing coal-fired
20 plant in western Washington operated by Pacific Power & Light
21 Company).

22 Applicants' Exhibit No. 18B is a table consisting of three
23 sheets giving details of loads and resources for Puget projected
24 for the period 1975-76 through 1985-86. In addition to power
25 generated at our own facilities, Puget currently purchases approxi-
26 mately 1,700 megawatts of firm capacity from hydroelectric projects
27 located on the Columbia River through long-term contracts with

1 the various public utility districts which own the projects.
2 Presently these arrangements account for almost 60 percent
3 of Puget's total firm resources. These contracts contain with-
4 drawal provisions whereby the districts, upon giving proper
5 notice under the contracts, can increase their respective with-
6 drawals of plant output, thereby ultimately reducing Puget's
7 firm capacity from these projects by about 640 megawatts. The
8 contract hydro, shown on Exhibit No. 18B, line 5, is based on
9 estimated withdrawals by the various public utility districts
10 owning the projects and does not reflect the maximum withdrawals
11 which the public utility districts could make.

12 Puget has other miscellaneous power supply resources as
13 shown on lines 11 through 14, Exhibit No. 18B.

14 Line 28 of Exhibit No. 18B shows the surplus or deficiency
15 in megawatts between the total resources and total load of the
16 company when Colstrip 3 and 4 are included. Line 29 of Exhibit
17 No. 18B shows the surplus or deficiency in megawatts between the
18 total resources and total load of the company when Colstrip
19 3 and 4 are excluded.

20 As a result of regional planning and coordination, Puget
21 is participating in joint arrangements with other utilities
22 for the construction of large thermal plants in the Pacific
23 Northwest. The projects planned for the Northwest and Puget's
24 participation are shown in Applicants' Exhibit No. 18E. The
25 plants described in Exhibit 18E are included as resources in
26 the summary of loads and resources set forth in Exhibit 18B.

27 Applicants' Exhibit No. 18C is a simplified chart of energy

1 loads and resources of Puget for 1975-76 through 1985-86 which
2 were numerically depicted on Exhibit 18B. On this chart projected
3 critical period loads are shown as the heavy dashed line. The
4 blue depicts total net resources and the yellow portions are
5 the contributions to firm energy by Colstrip Units 3 and 4.
6 Note that without Colstrip 3 and 4, Puget will incur deficits
7 for the years 1979-80 through 1985-86. With Colstrip 3 and
8 4, Puget will incur deficits for the years 1979-80 through
9 1982-83 and in 1985-86.

10 Applicants' Exhibit No. 18D is a simplified chart of
11 peak loads and resources of Puget for 1975-76 through 1985-86.
12 This chart is in the same format as Exhibit No. 18C. The heavy
13 dashed line is the projected peak load, the blue is our peak
14 resources and the yellow is the contribution of Colstrip 3 and
15 4. Without Colstrip 3 and 4, Puget will have peak deficits
16 for the years 1980-81 through 1985-86. With Colstrip 3 and
17 4, Puget will have peak deficits during the years 1982-83,
18 1984-85 and 1985-86.

19 In looking at generating resources which might be substituted
20 for Colstrip 3 and 4, the alternatives generally considered
21 are:

- 22 1. The purchase of power from other utility
23 companies,
- 24 2. Not building additional generation, and
- 25 3. The construction and operation of some different type
26 of electric generating source.

27 A discussion of each of these will show why coal and nuclear

1 are the only reasonable firm energy resources being considered
2 by electric utilities of the Northwest.

3 Purchase of Power

4 The first alternative considered is the purchase of power
5 from other members of the Northwest Power Pool (NWPP), or from
6 utilities outside the NWPP within the Western Systems Coordinating
7 Council (WSCC).

8 The West Group of the NWPP faces an energy deficiency through
9 1983-84, even if all planned projects are completed as scheduled.
10 Consequently, other regional utilities could not make base load
11 power available to Puget.

12 The members of the WSCC, outside this region, are faced
13 with problems similar to those encountered by utilities nationally
14 and do not have surplus base load power available for sale.
15 These problems include delays in construction schedules resulting
16 from inability to obtain necessary permits or licenses, growing
17 power demands, environmental problems and fuel shortages which
18 threaten the ability to provide an adequate and reliable power
19 supply.

20 The Bonneville Power Administration recently investigated
21 with neighboring utilities in California, Montana, Idaho and
22 British Columbia the possibility of securing energy from such
23 utilities during the late 1970's and early 1980's to make up
24 projected deficiencies on the Federal system at that time.
25 No power could be guaranteed during that period by any of these
26 utilities.

27 Not Building Additional Generation

Not building any additional electric generating projects

1 would mean that Puget would be unable to carry out its statutory
2 responsibility as a public service company to provide electric
3 service to new customers and to meet increased loads of existing
4 customers in its service area. In fact, if Puget failed to
5 obtain additional energy resources, existing firm load would
6 eventually have to be curtailed due to the withdrawal provisions
7 in Puget's power contracts with public utility districts.

8 Voluntary conservation by Puget's customers would not stabilize
9 energy usage at existing levels. Puget was one of the earliest
10 utilities in the power conservation movement through its adver-
11 tising practices and conservation programs. In 1966, Puget's
12 management took steps to reduce load-promotional type advertising.
13 By 1969, expenditures for this type of advertising had been
14 curtailed by 50 percent under pre-1966 levels and in 1970 were
15 discontinued altogether.

16 In 1970, Puget initiated a program for voluntary peak
17 reduction during certain peak hours on heavy consumption days,
18 generally in December and January. This program involves a
19 number of industrial and commercial customers, as well as many
20 schools. The response has been encouraging. The peak reductions
21 resulting from the program, combined with the curtailment of
22 interruptible industrial and school loads under regularly filed
23 tariffs, are estimated to have accounted for about a two percent
24 reduction in the peak load demands. Although this reduction
25 is important, it is too small to allow deferral or elimination
26 of additions to peak generating resources. In addition, this
27 program would have no effect on the need for Colstrip 3 and

1 4 as those units are planned as a base load energy resource--
2 not a peak resource.

3 In 1972, Puget embarked on an energy conservation program.
4 As part of this program, Puget has produced and distributed
5 booklets on energy conservation, incorporated a conservation
6 theme in our advertising programs, and made numerous presentations
7 to the general public and service organizations. Puget's appli-
8 cation engineers assist customers in choosing facilities and
9 operating procedures to reduce their energy requirements.
10 This program has been reasonably successful. Voluntary conserva-
11 tion measures have been taken into account in the approximately
12 six percent average annual load growth forecasted for Puget's
13 system in the 1980's, which rate is 25 percent less than the
14 historical growth rate on Puget's system. Although conservation
15 is important and will continue to be emphasized, it is apparent
16 that voluntary conservation programs will not permanently stabilize
17 power use at existing levels.

18 19 20 Alternative Generation Sources

21 Colstrip 3 and 4 will be a base load, firm energy power
22 resource. The expected pattern of operation will be at or
23 near full power 24 hours per day except when shut down for
24 maintenance or forced outages. This would result in an average
25 annual plant factor of about 75 percent. Various alternative
26 means of supplying base load energy considered are as follows:

1
2 1. Experimental Energy Sources. There are possible sources
3 of electrical power that show some promise for use at some time
4 in the future, but which are not sufficiently advanced in develop-
5 ment to be viable alternatives to the Project.

6 Geothermal power is being produced in relatively small
7 quantities in California and elsewhere in the world (a worldwide
8 total of about 1000 mw) and is being studied for favorable sites
9 in the United States. The State of Washington has estimated
10 that geothermal energy theoretically could supply ten percent
11 of Washington's electric power needs at the 1970 level for about
12 110 years. However, the estimate is based on generalized geologic
13 data only (i.e., data from the discovery phase of exploration).

14 Other phases of geothermal development include geological
15 reconnaissance, leasing of prospective areas, detailed geophysical,
16 geochemical and thermal surveys, test hole drilling, detailed
17 investigation including flow tests and estimating reservoir
18 potential. No utility has yet installed geothermal capacity
19 approaching the total capacity of Colstrip 3 and 4--1,400 mw..
20 Thus, time to complete the process is unknown but based on PG&E's
21 experience at the Geyser's field in California, an optimistic
22 estimate might be three years to complete the investigation
23 phase, six to seven years to bring the first increment of power
24 on line and eight to ten years additional to develop the full
25 generating capacity. Therefore, considering the estimated dates
26 for commercial production from Colstrip 3 and 4, geothermal
27 energy is not considered to be a viable alternative.

1 Another important aspect of geothermal power potential
2 in the Northwest is the environmental impact related to location
3 of potential areas. The principal areas are along the scenic,
4 forested Cascade Mountain Range in the western part of the
5 region and similar areas of Idaho and Montana. The practicability
6 of development, such as drilling, construction of power plants
7 and associated pipelines and transmission lines to load centers,
8 in these environmentally sensitive areas is uncertain. Adverse
9 environmental effects include noise, smell, disposal of acid
10 wastes and water quality impacts. For these additional reasons,
11 geothermal power must be dismissed as an alternative to Colstrip
12 3 and 4.

13 The fast breeder reactor has reached an advanced stage of
14 design and a demonstration project is to be built. Assuming
15 successful operation of the demonstration project, commercial
16 breeder reactors may be operational by the mid-1990's.

17 Solar power also has long-range potential. The various
18 possibilities are currently under investigation, but no feasible
19 method now appears likely to be developed to the point of com-
20 mercial availability for general installation before the mid-
21 1990's.

22 Power from the wind has been demonstrated on a small scale,
23 but this is also an intermittent power source and not an alter-
24 native to the Project.

25 While nuclear fusion offers promise, the feasibility of
26 any type of fusion reactor is still unproven. Most
27

1 experts expect that commercial application will occur no sooner
2 than the year 2000.

3 Energy converters, such as the magnetohydrodynamic generator,
4 are future possibilities but will require much more research
5 and development before they are ready for commercial application.

6 2. Base Load Hydroelectric Power. Most suitable hydro
7 sites in the Pacific Northwest have already been developed.
8 Some of the existing hydroelectric installations are suitable
9 for further expansion. However, in most cases such expansion
10 will only provide additional peaking capability and not significant
11 amounts of firm energy, which disqualifies them as alternatives
12 to the Project.

13 3. Pumped-Storage Hydroelectric Power. Pumped-storage
14 projects are used in conjunction with a base load project to
15 store energy generated during off-peak hours to make it available
16 during hours of peak load or for other short-duration periods.
17 Their function is to provide peaking capacity at the expense
18 of some additional total energy generation because the process
19 requires more energy than it produces. A pumped-storage project
20 is not a substitute for a base load energy project, but rather
21 is a valuable adjunct.

22 4. Nuclear Plants. In regard to nuclear power, lead times
23 for completion of nuclear plants presently are projected to
24 exceed ten years. Therefore, a nuclear plant could not be built
25 in time to replace Colstrip 3 and 4 which are scheduled to come
26 on as resources in 1980 and 1981, respectively.

27 5. Fossil Fuel Steam Generating Plants. Nearly all large

1 base load energy generating projects, other than hydroelectric,
2 employ steam turbines as prime movers. The necessary heat for
3 steam generation is obtained from the combustion of fossil fuels or
4 nuclear fission. The principal fossil fuels burned for power
5 generation in the United States, other than coal, have been oil
6 and natural gas.

7 A gas or oil-fired base energy generating project of 1400-mw
8 is not a feasible alternative to the Project for a number of reasons.
9 The uncertain foreign supply situation with regard to both the near-
10 term and long-range needs of the United States has resulted in a
11 national policy directed toward the goal of self-sufficiency in
12 energy by the end of this decade. The achievement of this goal will
13 require that the uranium and coal resources of the United States
14 become the major sources of energy, with a corresponding decrease
15 in the reliance on oil and natural gas resources. Natural gas is
16 the fossil fuel resource with the smallest proven recoverable
17 reserves in relation to its use. Because of this probable long-
18 term shortage of natural gas, new industrial consumption of this
19 fuel is considered to be detrimental to the public interest.

20 The construction of additional oil- or gas-fired base load
21 projects in the face of the current and projected shortages of these
22 resources would be unrealistic. In fact, the Federal Energy Agency
23 was granted authority under the Energy Supply and Environmental
24 Coordination Act of 1974 to prohibit the use of oil or natural gas
25 as fuel for new base load thermal generating plants and to require
26 existing plants using oil or natural gas to convert to coal.
27 Regulations under that Act have been issued by FEA and FEA has been

1 exercising authority pursuant to these regulations. An oil- or gas-
2 fired plant is not an alternative to the proposed Project.

3 6. Combustion Turbine Generators. Combustion turbine generator
4 projects are not a practical alternative to base load energy
5 generating projects like Costrip 3 and 4. Despite the relatively
6 low capital cost of gas turbines, they suffer from the same
7 fuel problems as oil-fired steam projects as previously discussed.
8 The scarcity and expense of oil are prohibitive to even con-
9 sidering combustion turbines as an alternative to Costrip
10 3 and 4. The amount of oil that a gas turbine would burn to
11 produce the energy equivalent to Colstrip Units 3 and 4 for
12 one year would amount to over 20 million barrels. At today's
13 prices of about 36 cents per gallon, or \$15.12 per barrel,
14 the total cost of the fuel alone would be over \$300 million
15 for one year. Thus, I see combustion turbines serving emergency,
16 standby and peaking purposes only.

17 From this discussion it is evident that there are no feasible
18 alternatives to Colstrip 3 and 4 within the time frame for
19 which they are planned and if these units are not constructed
20 a severe power shortage would result. If Puget were to have
21 insufficient resources to meet firm load during any given opera-
22 ting year, we would have no alternative but to request permission
23 from the Washington Utilities and Transportation Commission
24 to curtail firm load. Under the Pacific Northwest Coordination
25 Agreement, each of the parties, including Puget, has agreed
26 that during each operating year such party will have available
27 to it sufficient firm peak and energy resources to meet its

1 firm peak and energy load forecasted for that year. This deter-
2 mination of loads and resources is made each year prior to
3 the commencement on July 1 of the next operating year. Any
4 party that entered an operating year with firm resources less
5 than firm load would be in breach of the Coordination Agreement
6 and would be jeopardizing the operations of the regional inter-
7 connected system. Consequently, the utility would have no
8 alternative but to curtail firm load to the extent necessary
9 to balance its loads and resources.

10 To summarize the need for Colstrip 3 and 4 from Puget's
11 standpoint, the units are absolutely necessary to meet the
12 energy requirements of Puget as well as the region. The only
13 alternatives require interim use of oil in such amounts that,
14 if available at all, would be an undue cost for Northwest power
15 users and contrary to national energy objectives.

16 Applicants' Exhibit No. 115-B is Puget Sound Power & Light
17 Company's Annual Report to its shareholders for the year 1974.
18 The Exhibit is one which is prepared every year by the Company
19 and was prepared in the usual and ordinary course of its business.

1 HEARINGS EXAMINER: You move all the exhibits
2 connected to his testimony at this time?

3 MR. BELLINGHAM: Yes, sir, I move the admission of
4 all the exhibits connected and referred to in Mr.
5 Knight's testimony, at this time referring specifically
6 to Applicants' Exhibits 18, 18-A, 18-B, 18-C, 18-D,
7 18-E, and 115-B.

8 HEARINGS EXAMINER: Very well, we'll reserve any
9 ruling to the completion of cross-examination. Mr.
10 Shenker, you may cross-examine.

11
12 EXAMINATION OF DAVID H. KNIGHT

13 Cross, by Department of Natural Resources and Conservation

14 By Mr. Shenker:

15 Q You finally have your chance on the record, Mr. Knight. You
16 sat patiently during the early part of the hearings thinking
17 that there just might be a chance that you might testify.

18 A Sooner or later.

19 Q Sooner or later. First, I wanted to ask you, Mr. Knight, to
20 make sure that we understand the terms from company to com-
21 pany, sometimes the terms are not used uniformly. When you
22 refer to a resource available to the Puget Sound Power &
23 Light Company, are you referring to it by its gross capacity,
24 net capacity, or name plate rate?

25 A It depends on what term you are dealing with and what you're
26 talking about, whether you're talking about peak, or whether
27 you're talking about energy.

28 Q Let's take them separately.

1 A All right. On our capacity, as we normally list on our
2 firm resources, the capacity is the demonstrated capacity of
3 that unit. Name plate rating normally may be something
4 different, in some cases above, some cases below. It's the
5 demonstrated capacity of that unit.

6 Q What do you do for units that have not yet demonstrated any-
7 thing because they haven't been built?

8 A Then we're only making up the assumed nominal rating of what
9 it will be.

10 Q Would that be the name plate rating?

11 A It very well may be the name plate rating.

12 Q In the actual exhibit that you prepared to show the resources
13 projected for the Puget Sound Power & Light Company, is that
14 what you have done? You've used the name plate rating for
15 those projected resources?

16 A Yes, those are name plate ratings.

17 Q And the actual resources, of course, could be something more
18 or less than what the name plate shows?

19 A Possibly, yes.

20 Q Has it been your general experience that the name plate rating
21 is more or less than what you actually sustain?

22 A I think generally with respect to our hydro units the
23 demonstrated capability has exceeded the name plate ratings.
24 We have very little experience in thermo plants.

25 Q Your first thermo plant experience is here at Colstrip 1,
26 isn't it?

27 A Well, not exactly. We do have a coal-fired plant that was
28 built in 1930 that's still an operating unit on our system.

1 Q It's an obsolete system, isn't it? That particular unit
2 is obsolete, isn't it?

3 A I wouldn't conclude it is obsolete. It's still a viable
4 unit on our system, to be used as a peaking unit. Any time
5 we need to put it on the line, it goes on the line, and
6 then our participation is 7%, the Centralia plant.

7 Q You're talking about what, 98 megawatts out of the Centralia
8 plant?

9 A That's right.

10 Q What's been the experience at Centralia? Have you had more
11 or less than the name plate ratings there?

12 A To date less than the name plate ratings.

13 Q At Colstrip 1 you've been in operation for about four months
14 altogether -- not all of that, of course, has been solid,
15 firm operation. What's your view there? Are you going to
16 be over or under your name plate rating?

17 A I'm not sure what the name plate is on those units.

18 Q 330 megawatts.

19 A If that's the name plate, we expect to get the 330, net.

20 Q More or less?

21 A Net, exactly -- probably.

22 Q You missed the opportunity to join the rest of us happy
23 folks on Friday last to wander through the Colstrip Unit,
24 where we all had a chance to feast our eyes on the name plate
25 and the numbers that appeared on the name plate, on the
26 equipment. It says 330 megawatts. On that day, as a matter
27 of fact, they were operating at 330 megawatts. There have
28 been days on which they've been above that, I understand.

1 Do you understand that to be the case?

2 A Yes.

3 Q Now, in the statement of testimony you prepared, Mr. Knight,
4 as you look at the Puget Sound Power & Light Company loads
5 and resources, that's your responsibility for the company,
6 isn't it?

7 A Certainly resources are my responsibility, and I have a lot
8 to do with the loads of the company.

9 Q And the forecasting job is generally under your supervision?

10 A Well, the forecasting job is actually done under the Rate
11 and Marketing Department, but with consultation I review
12 with them how they do it, because I end up with the responsi-
13 bility of providing necessary resources to meet that load.

14 Q As you currently project, even if Puget Sound were to obtain
15 its 25% from Colstrip Units 3 & 4, Puget would still be in
16 a deficit situation for firm energy for all of the years
17 1979 through 1986, with the exception of the 2-year period,
18 1983 to 1985, isn't that true?

19 A That's true.

20 Q So the Colstrip units would help Puget as far as resources
21 are concerned for only a couple of years -- 1983 to 1985, in
22 terms of surplus vs. deficit? Isn't that true?

23 A I'd like to have you restate that question, sir.

24 Q Colstrip isn't going to do the job for you at Puget Sound,
25 alone, for any years except 1983-1985, isn't that true?

26 A It will not do the total job for our system. No individual
27 resource does the total job for our load.

28 Q What I want to know, Mr. Knight -- what I would like to ask

1 you to inform the Board of Natural Resources in this pro-
2 ceedings about is how are you going to solve that deficit
3 situation for all those years 1979 through 1986?

4 A Between 1979 and 1982, I undoubtedly will have to solve that
5 deficiency with oil-fired units. 1985-86, it's not definite-
6 ly necessary but what a change may be -- some of the nuclear
7 plants may be able to be brought in a little earlier, or
8 something, but that one isn't outside the realm of maybe
9 being able to do something. The other ones are already out-
10 side the realm of timing.

11 Q But you're going to do something about the deficit situation
12 -- you have to, by statute, don't you?

13 A That is correct.

14 Q And you must be about in process right now, in the year 1976,
15 to solve your 1979 problem, aren't you?

16 A That is correct.

17 Q What are you doing?

18 A I have oil-fired generation lined up to cover that deficiency.

19 Q Have you got the oil?

20 A No, I don't have the oil.

21 Q What are you going to do in 1979 with an oil-fired unit
22 without any oil?

23 A I'm hoping to get an allocation of oil from the Federal
24 Energy Administration.

25 Q Because you have what you might call a "near term", in terms
26 of Federal Energy Administration language, or to speak plainer,
27 a short term problem that should end by 1983 that requires
28 the use of those oil-fired facilities, right?

1 A That will be what we require, yes. We have -- well, it
2 could possibly be solved with extreme good water conditions,
3 but if not, we will have to get an allocation of oil.

4 Q So from 1979 to 1983, you're just going to have to solve this
5 problem, either by having hydro resources available to it
6 greater than now projected, or having oil available to run
7 oil-fired units.

8 A That is correct.

9 Q Now, you're not going to do anything, except pray, perhaps,
10 to make sure that the hydro resources are greater than you
11 now project, isn't that true?

12 A That's about the limit of my capability.

13 Q And you can't make more water than actually is produced, and
14 therefore if the water situation is as good as it was this
15 year, 1975, or as good as it was the year before in 1974,
16 then you're not going to have a deficit in those years, 1979
17 to 1983, right?

18 A I'm not sure about the '82-'83 year. I think if the water
19 in the '79-'81 year are as good as they have been the last
20 year we would wipe out the deficit.

21 Q Because you like most of the other utilities here in the
22 Pacific Northwest are primarily at the moment a hydro powered
23 facility?

24 A That is correct.

25 Q And like most of the utilities here in the Pacific Northwest
26 that are hydro powered, you do your projecting on the basis
27 of critical water?

28 A That is correct.

1 Q Which means to you that if the water situation is as bad as
2 it was in its worst period within the last 45 years, then
3 that is the basis on which you should be predicting your
4 resources, right?

5 A I would phrase it another way.

6 Q Go ahead.

7 A That is, our firm resources are based on the fact that water
8 will not get any worse than it has been historically.

9 Q But your firm resources are also based on the fact that it's
10 not going to be any better than when it was worst?

11 A That establishes what firm is; that's a definition of firm.
12 You can count on it. Remember, Mr. Shenker, when that
13 critical period was established, it was a new record that
14 had never been established before.

15 Q Yes, sir. The fact of the matter is that out of the 45-year
16 period, for 44 of those 45 years you never had a water
17 condition that bad.

18 A On the contrary, the critical period is a 4½ year period.
19 It's not a 1-year period.

20 Q From 1928 to 1932, is that right?

21 A Right.

22 Q And there's been no 4½ year period since 1932 in which the
23 water was as bad as it was from 1928 to 1932?

24 A That is correct.

25 Q So from 1932 to 1976, out of a period of 44 years, there
26 has not been a single year in which the hydro resources
27 available to you were as few as you have projected, based
28 upon critical water?

1 A The 1936-37 individual year was much worse than any of the
2 years between 1928 and 1932.

3 Q But the 4½ year projection, 1928-32, has never been equalled
4 by any period like it since?

5 A Not for the same period of time.

6 Q And since 1936, Mr. Knight, have you had a year in which the
7 hydro resources available to you were as few as you have
8 projected?

9 A The answer to that is, of course, yes, except for the fact
10 that of course the resources are changing from period to
11 period and time to time.

12 Q We're not going to play games. Without the trades in and
13 out and the availability of the resources into which you've
14 bought -- we understand that those variations of the theme
15 can be made.

16 A I would like to have continued.

17 Q Surely, go ahead.

18 A For example, the runoff in 1973 that created the problem in
19 '73 was much worse than any runoffs that we'd ever gotten
20 before, and had we not -- if the situation hadn't changed
21 in the middle of November, we would have been much worse
22 off than any of the historical records, but we did have to
23 go into curtailment during that period of time because of
24 the crunch of the critical period.

25 Q But in fact it did change, didn't it?

26 A It did.

27 Q And I suppose you could say that if in 1974 you didn't get
28 the amount of water that you did get, it would have been worse

1 than it was. You could say that, couldn't you?

2 A Yes.

3 Q But it doesn't help us very much, because we know how much
4 water you got in '74 and '75, and that's the basis on which
5 you've got hydro resources available to you, right?

6 A Yes, and we do know we had to curtail energy during that time
7 because of the shape that it came down out of the rivers.

8 Q Let me see if I can phrase the same question to you on the
9 other side of the coin. It is true, is it not, Mr. Knight,
10 that in the last 45 years you have always had more hydro
11 resources available to you than you had projected before
12 the year came?

13 A I've had more resources than I've had firm resources. I've
14 had some secondary energy, but this hasn't occurred on a
15 continuous basis, nor every month of the year.

16 Q But every year it's occurred, hasn't it?

17 A Some. A considerable amount of those extra resources occurred
18 in the summertime when there's no load to carry with those
19 resources.

20 Q All of the utilities that are applicants here, and certainly
21 Puget Sound, does its load and resource planning on an annual
22 basis, does it not?

23 A That is correct, on a water-year basis.

24 Q If you look at peak for a moment, as I understand your written
25 testimony, you will have a deficit on peak supply for each
26 of the years 1982 through 1986, even if you have the Colstrip
27 units available to you, right?

28 A Currently with the resources that we do have on a firm basis

1 that would be the case. We do expect to be able to cover
2 those capacity deficiencies.

3 Q How are you going to do that?

4 A The area does not show capacity deficiency during those
5 periods of time.

6 Q So you're going to buy it from somebody else?

7 A Additional hydro units will go in on the Columbia River and
8 other streams.

9 Q I see. So Puget's plans, as you understand it, between the
10 years 1982 and 1986 for peak requirements are to purchase
11 peak capability from non-owned sources between the years '82
12 and '86?

13 A If the other energy sources come in that we're planning, that
14 would be the route we will go.

15 Q Right. What's to keep the Montana Power Company from doing
16 that if they wanted to?

17 A During those years I don't know, because I'm not privy to
18 what their problems are.

19 Q How about Portland General Electric Company? Couldn't they
20 do that during those years, too?

21 A They can. I suspicion that they are not deficient in those
22 years.

23 Q What about the Pacific Power & Light Company? Could they
24 do that for those years, too?

25 A To the degree that there is energy capacity available that
26 they could purchase.

27 Q And the Washington Water Power Company, could they do that, too?

28 A Yes.

1 Q The general view of the Puget Sound planning for thermal
2 and nuclear resources more heavily weighs in favor of nuclear
3 than coal-fired units, does it not?

4 A Our plans are, as we move out, we'll have more nuclear
5 generation on our system than we will have coal-fired, yes.

6 Q You, of course, are a member of the Western States Coordinat-
7 ing Council, Puget Sound is? Western Systems Coordinating
8 Council, excuse me.

9 A Yes.

10 Q And a member of the West group of the Northwest Power Pool?

11 A Yes.

12 Q Both of those bodies from time to time make decisions, do they
13 not, with respect as to the allocations that the various mem-
14 bers propose to make of the energy peaks that they will have
15 available for servicing loads, or for sale and surplus?

16 A I do not know what you mean by "they make allocations" --
17 no, they do not make any allocations.

18 Q How do they decide who's going to produce how much energy
19 and how much peak and who's going to have what available?

20 A The organizations you're talking about only accumulate the
21 data. It's the individuals that decide what they're going
22 to do and how they're going to meet their requirements.

23 Q You mean each individual utility does that by itself?

24 A No, they do in concert with the other utilities.

25 Q Well, each one makes its own decision and it listens to what-
26 everybody else says about what they're going to do, right?

27 A They all work together, yes.

28 Q Well, is there a parliamentary procedure by which someone

1 puts up for a vote what each allocation or share will be?

2 A No, there is not.

3 Q Each person decides what he's going to do, and he does it
4 in the spirit of harmony and cooperation, of course. Is
5 that the story?

6 A Well, they certainly work together to determine what resources
7 are needed, and it's obvious, and everybody has the data from
8 the other companies, so they can tell -- everybody knows
9 what they need. Everybody has the responsibility to meet
10 their firm load carrying capability.

11 Q I suppose that Puget doesn't have the opportunity to say to
12 anybody else, except in a persuasive manner, "Come and join
13 us as a participant in the Skagit project, or the Satsap
14 project, or some other project." You can't bring other
15 people in to invest in your own projects, can you?

16 A Not unilaterally.

17 Q No, in fact nobody has the power to do that as things are
18 structured these days, isn't that right?

19 A Right.

20 Q The Bonneville Power Administration is probably the largest
21 producer of power in the Pacific Northwest area where you
22 work, isn't it?

23 A That is correct.

24 Q And Bonneville acts in the same kind of concert with the other
25 utilities that you've just described for us, where everybody
26 works together?

27 A That's correct.

28 Q You're aware, are you not, Mr. Knight, of that task force

1 that has been established by the Bonneville Power Administra-
2 tion within the last few months, in order to take another
3 look at how best to determine loads and resources?

4 A I do not know what task force you're talking about.

5 Q You're not familiar with that? The one that Mike Katz heads.

6 A You mean the Bonneville?

7 Q Yes.

8 A You mean the State Regional Planning -- it's not Bonneville.

9 Q Well, Bonneville took the lead on it. Mike Katz, who's the
10 Chief Economist of Bonneville, is the head of the task force.

11 A Now I know what you mean.

12 Q Okay. Is Puget participating in that?

13 A Yes.

14 Q What's your prospective on the objective of that study?

15 A Well, I don't know how to really put it. I think it's really
16 a type of a study that will, because it is being done by an
17 independent, will be helpful to let the various states who
18 are interconnected really know about the problems we have in
19 meeting these load requirements.

20 Q Do you understand that there is any objective of the task
21 force to come to some better understanding of the uniformity
22 in methods and procedures for load forecasting?

23 A That may be one of the things that they're looking at. I'm
24 sure they haven't gotten started yet, and I've seen one
25 sheet that had something like 26 different things that Mr.
26 Katz is proposing to look at, and I think they're all well
27 worthwhile things for the task force to look at.

28 Q Are you presently in a rate proceeding in Washington?

1 A We're not in a proceeding now. We have filed for a rate
2 increase, yes.

3 Q I haven't had a chance to review the interesting documents,
4 I'm sure, you filed in support of your petition for a rate
5 increase in Washington, but I have reviewed the rather bulky
6 documents filed by the Montana Power Company for its petition
7 for a rate increase before the Public Service Commission here.
8 Have you said anything at all in your petition about the
9 impact of rates on demand?

10 A I do not know, Mr. Shenker, because the only information I
11 have is the data in my own testimony that has been filed,
12 and I've been on a 24-hour schedule for six months preparing
13 that.

14 Q Did you say anything in your own testimony about the impact
15 of rates on demand?

16 A No, I did not.

17 Q I take it it wouldn't surprise you to know that the Montana
18 Power Company's three volumes of testimony and exhibits in
19 support of their petition also says nothing about the impact
20 of rates on demand. That doesn't surprise you, does it?

21 A No.

22 Q However, Puget, unlike Montana Power, has had some studies
23 made on price elasticity, isn't that true?

24 A We have had a study done on an econometric model, which
25 includes price elasticity.

26 Q Have you built that econometric model into your load fore-
27 casting procedures now?

28 A It has been tested against our present procedures.

1 Q It has been tested against them?

2 A Yes.

3 Q Have you built an econometric model into your present
4 procedures?

5 A No, because the problem is we haven't been able to define
6 all those many, many inputs that go into it, and they haven't
7 been established yet.

8 Q Is the National Economic Research Association working on
9 that for you?

10 A They have. I don't know whether they're working on it now
11 or not.

12 Q Kent Anderson who is from that company is one of the folks
13 who's been working on it for you?

14 A Yes.

15 Q Is he making any progress?

16 A Yes.

17 Q When did you talk to him last?

18 A Well, I haven't talked to him since August.

19 Q Does he have a working relationship with someone else in your
20 company?

21 A Yes, with Mr. Swartzell.

22 Q What's his function, Mr. Swartzell?

23 A He is the Director of Rates and Marketing.

24 Q In your statement of testimony, Mr. Knight, you referred to
25 some alternative generation sources, the first of which is
26 what you call experimental energy sources -- that's what Mr.
27 Labrie, I think, called futuristic. While you were sitting
28 here this morning you heard him discuss those, did you not?

1 A Yes, sir.

2 Q Your testimony is in very close agreement with his on that
3 subject, is it not?

4 A I believe so.

5 Q These are all interesting things, you're in favor of support-
6 ing them, they should be encouraged, and you're not now
7 engaged in the process of implementing any of those alternatives,
8 yourself, are you?

9 A Not as far as implementing them, no.

10 Q By the way, Mr. Knight, one of the concerns that you note with
11 respect to geothermal resources -- it's on page 11 of your
12 statement, line 9 -- is that there are some adverse environ-
13 mental effects -- noise, smell, disposal of wastes, and water
14 quality impacts. Have you ever heard of those effects around
15 coal-fired stations?

16 A Not to the same degree, no.

17 Q You've heard of them, though?

18 A Yes.

19 Q All of them?

20 A Yes. We have equipment to attenuate those adverse effects.

21 Q Did you have that equipment in Centralia?

22 A Yes.

23 Q Did it work?

24 A It's working now.

25 Q Did it work when you first put it in?

26 A Yes, it worked, to the loading that we put on the plant. You
27 bet it worked, but we were held down in the final loading
28 in the plant.

1 Q You sure were. It was a 1400 megawatt plant. What did it
2 operate at?

3 A 1100.

4 Q You lost 300 megawatts because the pollution control systems
5 wouldn't work, right?

6 A They did not meet, but they do now.

7 Q When did that plant open?

8 A When did it go on line?

9 Q Yes.

10 A The first unit in 1971.

11 Q And it was last year that it came into full compliance with
12 the Washington State Department of Ecology regulations,
13 right?

14 A That was 1973. Late '73, probably.

15 Q It was 1975 that it received certification from the Washing-
16 ton State Department of Ecology on compliance, isn't that
17 correct?

18 A I'm not aware of that. I think you should probably direct
19 that question to Pacific Power & Light.

20 Q Pacific's the project sponsor for Centralia, the same way
21 Montana Power is the project sponsor for Colstrip?

22 A That is correct.

23 Q Okay. Mr. Knight, as heavily hydro powered as Puget Sound is,
24 you must know, sir, do you not, what the Federal Power
25 Commission has determined by way of feasibility for develop-
26 ment of additional hydro sites in the State of Washington?

27 A As far as feasibility is concenred?

28 Q Yes, sir. Engineering feasibility.

1 A I don't know what engineering feasibility is, other than the
2 fact maybe you could build it. If that's what you mean,
3 even though economically you could and environmentally you
4 could or couldn't, is that what you mean, could it be built?
5 I am aware of a list that has been put together.

6 Q I beg your pardon?

7 A I'm aware of a list that has been put together, by the Corps
8 of Engineers.

9 Q What's the total?

10 A I do not know.

11 Q Are you not aware, Mr. Knight, that the State of Washington
12 has more hydro sites availability, in terms of total megawatt-
13 age, than any other state in the United States, including
14 Alaska?

15 A No, I am not aware of that.

16 Q Do you deny it?

17 A No, I do not deny it.

18 Q Have you examined any of the Federal Power Commission's studies
19 on that subject?

20 A In answer to that, yes. We have examined, not necessarily
21 Federal Power, but certainly I've examined the Corps of
22 Engineers study on this thing, of all the sites, what the
23 economic feasibility are of those sites, and what the environ-
24 mental problems are in those sites. Presently there are
25 absolutely none that can produce energy to meet the load
26 requirements in our area. If this could be done, it certainly
27 would be being done.

28 Q Well, in your statement, Mr. Knight, you say that most suitable

1 hydro sites in the Pacific Northwest have already been
2 developed, that some of the existing hydroelectric installa-
3 tions are suitable for further expansion. Now, if only most
4 have already been developed, but some are suitable for further
5 expansion, there must be some way to quantify that, isn't
6 there?

7 A Well, the main ones, of course, that are suitable for energy
8 expansion is the Ben Franklin site on the Columbia River. Of
9 course, the Snake River was under consideration, and it has
10 its problems now, as you know. The City of Seattle --

11 Q Let's just take them one at a time. The Ben Franklin site
12 on the Columbia River has what capacity for expansion?

13 A It hasn't been built yet. There is head there which would
14 create energy.

15 Q How much?

16 A My estimate was from around 450 to 500 average megawatts, and
17 that's only off the top of my head.

18 Q Okay, the City of Seattle?

19 A The City of Seattle has a proposal before the Federal Power
20 Commission to raise Ross Dam, which would give them something
21 like 144 megawatts of energy, I believe.

22 Q Any others?

23 A Other than the Snake River, which I mentioned -- that is
24 tied up now. Those are the only ones that I know of that
25 you could get an additional block of energy from.

26 Q Now, as far as peaking is concerned, there is substantially
27 more availability from hydro sites, isn't there?

28 A That is correct.

1 Q How much?

2 A In our present plans there is something like between seven
3 and eight million capacity planned in hydro.

4 Q Is that kilowatts or megawatts?

5 A Did I say million?

6 Q Yes.

7 A Then that's kilowatts -- 7,000 to 8,000 megawatts.

8 Q 7,000 to 8,000 megawatts of additional peaking capacity
9 from hydro sites in the State of Washington?

10 A I'm not sure it's all in the State of Washington. Some of
11 it may be bordering the line between Washington and Oregon.

12 Q How far along have those plants come, Mr. Knight?

13 A Well, they're moving right along. The first 600 megawatt
14 unit at Coulee has been installed; it's in operation. There's
15 two more under construction, and they're moving ahead with
16 additional units at the Chief Joe site. We with Chelan
17 County are moving ahead with an additional 400 megawatts of
18 capacity at the Rock Island site.

19 Q 410 megawatts, right?

20 A It's in that range.

21 Q Other than your Chelan site at Rock Island, Washington,
22 aren't you in on the action for the development of any of
23 the other hydro sites?

24 A No, they're all federal.

25 Q Do you have any contracts for purchase of any of that power?

26 A Not as of now I do not.

27 Q Are you planning to?

28 A If I need it, yes.

1 Q That, I take it, is one of the ways that you see your way
2 clear to obtaining sufficient resources in the period in
3 which you now show deficiencies?

4 A For capacity only.

5 Q Yes, we were talking about peaking, and you explained that
6 the region as a whole, referring to the Pacific Northwest,
7 was not deficient for peaking over the period that your
8 company was, and you were going to plan to purchase some
9 over that period of time, right?

10 A Yes.

11 Q One of the places from which you'd purchase would be the
12 owners of these new hydro sites, which in most cases is the
13 federal government?

14 A In most cases.

15 Q Now, you intend to use the Colstrip power both for peak and
16 for energy, don't you?

17 A Well, they intend to have it in operation every hour possible
18 around the clock, so I hope it'll be there on the peak.

19 Q Well, you've got it projected that way in your resources,
20 don't you?

21 A That's right.

22 Q If you'd look with me, Mr. Knight, at the exhibits which you
23 have prepared for Puget in connection with your testimony,
24 do you also have available to you the whole set?

25 A No, I do not.

26 MR. BELLINGHAM: What is it?

27 MR. SHENKER: Exhibit 18 through 18-E as the last
28 previously revised.

1 Q Labeled "D. H. Knight Testimony, Colstrip 3 & 4" in the
2 upper lefthand corner of Exhibit 18 --

3 A Yes, I believe I have it now, sir.

4 Q Let's see if we can compare these. As I understand Exhibit
5 No. 18, it's in multi-color now, your latest revised edition,
6 and it shows the actual peak, the estimated peak, the actual
7 average energy, and the estimated average energy?

8 A Yes, sir.

9 Q And that's for the period 1960 through 1986, up at the top
10 of the page?

11 A Yes, sir.

12 Q Now, in the first revised edition, the first edition before
13 the revised one that we're looking at now, you listed your
14 actual peak at 8.7% annual growth rate. It's now down to
15 8.1% average growth rate. Why that drop in the matter of
16 months between the revisions of exhibits?

17 A Just one more point --

18 Q Another year?

19 A One more year. That was a year in which we had extreme
20 warm temperatures and the peak load was down.

21 Q The load was down?

22 A The peak load was down.

23 Q In your system the peak occurs when people need heat, rather
24 than air conditioning, I take it?

25 A That is correct.

26 Q And it wasn't that cold a year, so your peak was down and
27 your average for the entire period from 1960 to 1975, over
28 a 15-year period, decreased by .6 of 1%, is that right?

1 A Not the average, the peak decreased, the average peak.

2 Q This is the average of the peak over that entire period of
3 15 years?

4 A These are not temperature corrected peaks, I might add.
5 These are the actual peaks.

6 Q These are the actual figures and you've presented them to
7 us for your exhibit?

8 A Yes.

9 Q Now, even though your actual peak has decreased from an
10 average of 8.7 to 8.1, you make no change at all in your
11 projected estimate of peak average growth from 1975 on, do
12 you, sir?

13 A That is true, nor would I have made a change in 1968-69,
14 when you saw the extreme one there, which probably sent the
15 line up several percentage points, because it's a temperature
16 condition, and you look at the average. We know that we
17 have large deviations in that peak load, depending upon the
18 temperature during those few hours of that individual day,
19 and we temperature correct those loads, and when we tempera-
20 ture correct them, we iron these extreme high and low peaks
21 out.

22 Q Okay, let's take a look at the average energy, then, which
23 is the line just below in the blue shades, for the latest
24 revised edition. That used to say 8.5% annual growth rate
25 for the actual average energy, and now it says 8.2%, so in
26 the months that have intervened between the two sets of
27 exhibits, this must have had a year sufficiently lower than
28 the ones that preceded it that you've reduced your average

1 over a 15-year period, right?

2 A Yes. In 1974 loads did not come up to the 8.5 average or
3 the 8.2%, nor is our projection that high. Our projection,
4 as you will note, is 6.1.

5 Q You've dropped that one down, haven't you, from where it
6 was before? It used to be 6.3 some months ago when the last
7 set of exhibits showed up?

8 A Well, it really hasn't been dropped down. It just has been
9 a different way in calculating that trend. One was a curve
10 fit and the other one was done in a different growth from
11 one end to the other. It's the same forecast.

12 Q 6.3 to 6.1?

13 A It's the same forecast.

14 Q If we look at Exhibit 18-A, Mr. Knight, the current revised
15 edition against the last revised edition, these are your
16 own generating facilities in which you have an ownership
17 interest? Right?

18 A Yes.

19 Q The only difference between the original edition and the
20 current revised edition is the presence of Colstrip No. 1
21 now that you did not have on before?

22 A I believe that's correct.

23 Q Why didn't you have it on before?

24 A It wasn't in operation.

25 Q This sheet, therefore, Exhibit 18-A, isn't supposed to give
26 us any projection, these are just the facts as they are at
27 the time of the preparation of the material?

28 A That is correct.

1 Q Now, if you turn to Exhibit 18-B, your latest revised edition
2 of Exhibit 18-B takes the years 1975 through 1985 on peak
3 and energy loads and resources, which is the same period
4 that is covered in the previous set of exhibits that are
5 dated March 31st, 1975. Now, I don't know what the date
6 of the current revised edition is, Mr. Knight. Can you help
7 me on that? When was this current exhibit 18-B prepared?

8 A I believe it was probably prepared in December.

9 Q Last month?

10 A Yes.

11 Q All right. So nine months later you took a look at the
12 average energy for the year 1975-1976, the year in which we
13 are currently engaged, and you come out with the fact that
14 your net total resources are 12 megawatts less, and your
15 surplus or deficiency, in this case a surplus, is 56 megawatts
16 less. How did that happen?

17 A Well, let's go down the line and see which plant has changed.

18 Q Maybe I can help you a little bit. Your exports have gone
19 up, so your total load is a little different. Right?

20 A Yes, exports have gone up. We delivered some summertime
21 energy to Utah.

22 Q Exports, that is something you send to somebody else?

23 A That's correct. The BPA commitments have changed, the
24 Hanford exchange energy has changed, and I believe that's --

25 Q Yes, you have 20 megawatts more from your BPA commitments
26 than you previously had, and you have 23 megawatts less from
27 the Hanford extension, right?

28 A Right.

1 Q Then you have a line called "Contracts in and Imports." You
2 now have 16 megawatts more of resources there. Did you buy
3 from somebody?

4 A Well, it's probably an exchange of part of the energy that
5 were exported above, delivered out one time of the year and
6 delivered back another time of the year.

7 Q Now, as far as Colstrip No. 1 is concerned, in March of 1975
8 you thought you'd get 112 average energy megawatts, and now
9 you have forecasted 87 average energy megawatts.

10 A I think that's the difference of whether it would be on
11 commercial in September rather than November as occurred.

12 Q But your peak is the same for Colstrip 1 for the year 1975-76,
13 isn't it?

14 A Yes.

15 Q Why is that?

16 A Because it was in operation by the time we normally have our
17 peak. If we have established a peak in December, and may
18 establish another peak before January is over with, in excess.

19 Q Now, if we look at the year 1976-77, then, on your current
20 revised edition of Exhibit 18-B, that shows a surplus of 101
21 megawatts, which is up some 36 megawatts over which you thought
22 it was going to be in 1975, right?

23 A That's right.

24 Q And so the following year, 1977-1978, you also show a surplus
25 of 8 more megawatts than you thought you were going to have
26 before?

27 A Yes.

28 Q And for the year after that, 1978-79, you have a surplus of

1 2 megawatts as opposed to the 6 megawatts deficiency that
2 you previously had forecast?

3 A Yes.

4 Q And then in 1979-1980 you have 74 megawatts less of a defici-
5 ency than you previously had forecast?

6 A Yes.

7 Q Mr. Knight, wouldn't you say that it's a fair reading of the
8 comparisons for the years 1975 to 1980, in the 9-month period
9 between the preparations of the two sets of exhibits, that
10 your surplus vs. deficiency situation has improved from your
11 standpoint?

12 A Very slightly.

13 Q We have some years now that are surplus that previously were
14 deficiency; you have more surplus than you used to have.
15 That's an improvement, isn't it?

16 A I said, a very slight improvement.

17 Q What would be a substantial improvement?

18 A A substantial improvement? If I didn't have any deficiency
19 in 1979-80.

20 Q What would be a substantial improvement before 1979?

21 A Well, actually I have a sufficient amount of energy to cover
22 my load. I'm not completely out of the woods as far as on
23 some months having to cover with oil-fired generation, but
24 I feel comfortable with having that level of surplus.

25 Q Up until the last year that I asked you to compare for me,
26 1979-80, of course there's nothing of Colstrip 3 & 4 that
27 would be involved in either of the two sets of exhibits, be-
28 cause those wouldn't have been available to you in your

1 original plan, right?

2 A Yes.

3 Q So the surpluses and deficiencies we're talking about were
4 regardless of Colstrip 3 & 4. They didn't enter into that
5 picture?

6 A That's right.

7 Q In your original set of the exhibits you did have for the
8 year 1979-1980 the use of Colstrip 3 & 4, apparently, if you
9 look at the comparison between lines 28 and 29. Do you agree
10 with me?

11 A Yes, we had Colstrip in there.

12 Q And now, of course, 1979-1980, Colstrip 3 & 4 are also
13 out of the picture, right? For that year 1979-1980 according
14 to your current revised edition of Exhibit 18-B?

15 A Yes, that's right.

16 Q Okay. So the first year in which you now project that there
17 should be any impact from the Colstrip units or the megawattage
18 that you will obtain from them is in the year 1980-81?

19 A That's the year now that we could have -- the first year we
20 could have a unit in. We've already lost the '79-'80 one.

21 Q Okay. 1980-81 is the first year in which the megawattage
22 from Colstrip 3 & 4 makes a difference in your current pro-
23 jection then, is that right?

24 A That's right.

25 Q In your current projections, Mr. Knight, do you have a con-
26 tingency plan of what you might do if you don't get Colstrip
27 3 & 4?

28 A I think I indicated my contingency plan is to have sufficient

1 gas turbines installed in my system and attempt to acquire
2 oil to operate them.

3 Q Well, indeed, that's what you're going to have to do even
4 with Colstrip 3 & 4, isn't it?

5 A To a considerable different degree.

6 Q Let's talk about how considerable that degree is. You're
7 talking in the year 1980-81, with the Colstrip units available
8 to you, of an energy deficiency of 121 megawatts. Without
9 Colstrip, 219 megawatts, for a different of something less
10 than 100 megawatts.

11 A It's 98 megawatts.

12 Q Now, that's what you'd have to face in the year 1980-81 if
13 you did not have Colstrip there, right?

14 A That is correct.

15 Q Now, in the next year, even if you do have Colstrip available
16 to you, you still have got to make up a deficiency of more
17 than 100 megawatts, and the year after that, even if you do
18 have Colstrip available to you, you still have to make up a
19 deficiency of more than 200 megawatts, isn't that correct?

20 A But I don't have to make up an additional deficiency of 227
21 megawatts.

22 Q Well, if you wanted to put a unit on between now and 1983, you
23 could do that, couldn't you, Mr. Knight?

24 A A gas turbine unit?

25 Q A coal-fired unit?

26 A I don't believe so.

27 Q Between now and 1983?

28 A Well, I'm not sure.

1 Q Well, you've been sure in the past when your deposition was
2 taken that the range was something like 5 to 6 years, isn't
3 that true?

4 A That was for construction, but remember, you start with the
5 siting studies and everything before you even get to the
6 point where you can start moving along.

7 Q In your view, there is approximately a 5-year lead time for
8 a 300 or a 500 megawatt fossil fuel-fired plant, and 6 years
9 for a 700 megawatt plant, isn't that true?

10 A That is true for construction.

11 Q You think that whole lead time is for construction?

12 A I think that was clarified later on. I'm sure you're reading
13 from a deposition, aren't you?

14 Q Yes.

15 A I think it's clarified later on.

16 Q I don't find it, but that may be the case. How about your
17 boss, the president, Ralph Davis? Were you present when he
18 was deposed?

19 A Yes.

20 Q His view was that it was $4\frac{1}{2}$ years for the construction time
21 -- excuse me, the lead time. Now I've got your term in
22 there. Do you disagree with him?

23 A I do not believe that today we could construct one in $4\frac{1}{2}$
24 years.

25 Q As a matter of fact, never having been the project sponsor
26 for a coal-fired generating station, you weren't exactly sure
27 what the lead time was for a steam turbine generator for
28 500 megawatts, were you?

1 A That is correct.

2 Q And you also could not definitely say what the lead time in
3 terms of manufacturing for a site alternative to Colstrip
4 would be in any event, isn't that true?

5 A I think you need to repeat that question. I can't tie
6 Colstrip into it.

7 Q If you were looking for a site as an alternative to Colstrip,
8 the fact of the matter is, at least as of the time your
9 deposition was taken, that you could not then say definitely
10 what the lead time would be, in terms of the manufacturing
11 of the equipment necessary, to put that site on stream?

12 A That is correct.

13 Q Do you know now?

14 A No.

15 Q Have you tried to find out?

16 A No.

17 Q It is still your opinion, is it not, Mr. Knight, that the
18 lead time of thermal power plants consists mainly of construc-
19 tion time and design and delivery of equipment?

20 A And proving out the site.

21 Q Do you agree with the statement?

22 A I don't think you completed it.

23 Q I did. Do you agree that the lead time of thermal power
24 plants consists mainly of construction time and design and
25 delivery of equipment?

26 A Mainly it does. I didn't catch that word before.

27 Q Do you agree with the statement?

28 A Yes.

1 Q There's a footnote that appeared on the second page of Exhibit
2 18-B in its March 1975 form that doesn't appear on the current
3 revised edition of Exhibit 18-B. The footnote said that
4 since the preparation of the table the scheduled date for
5 Skagit No. 2 had been changed to mid-1985, with a resulting
6 estimated operational date of February 1986. I assume, Mr.
7 Knight, that one of the reasons that you don't have that
8 footnote on Exhibit 18-B is that you do have some of your
9 units described under construction and planned with dates of
10 planned operation on Exhibit 18-E. Is that the reason for
11 that?

12 A Yes.

13 Q Let's look at Exhibit 18-E for a moment, then, if we may.
14 For all of the nuclear sites under construction or planned
15 as of the last time these exhibits were presented to us, is
16 there any unit that is still on schedule according to your
17 latest revised edition of the same exhibit?

18 A Of the nuclear plants?

19 Q Yes, sir. There are only four of them, aren't there?

20 A Any of the nuclear plants that we're building in the North-
21 west -- We have on the Satsap plant that we're involved with,
22 both No. 3 and WPPS Plant No. 1 has a delay, and also the
23 Skagit 1 & 2 is a 6-month delay.

24 Q Yes, they're all delayed. Now, before those delays occurred
25 did you check with the Montana Board of Natural Resources
26 and Conservation in order to coordinate scheduling with them?

27 A Scheduling of what?

28 Q You have moved some of your plants back.

1 A We haven't moved them back.

2 Q It just happened?

3 A We know that because of a delay in our licensing process we
4 can't make those schedules.

5 Q Did you tell the Board of Natural Resources and Conservation
6 in Montana about that so that they could talk with other
7 folks?

8 A We certainly will when we make our filing next spring. We
9 file once a year with them.

10 Q You file a long range plan?

11 A Yes.

12 Q You're asking the Board of Natural Resources and Conservation
13 to give you a Certificate of Public Need for the Colstrip
14 Units 3 & 4 in order to provide 25% of 1400 megawatts to Puget
15 Sound Power & Light Company, isn't that true?

16 A Yes, that's true.

17 Q And you're asking them to do that without having consulted
18 with them in advance of your having changed the scheduling
19 dates of planned operation on your other units, is that right?

20 A That has absolutely nothing to do with Colstrip. These units
21 are beyond time schedule.

22 Q There is another footnote on Exhibit No. 18-E that refers
23 to the Rock Island plant that we had a discussion about a
24 few moments ago. That says that the Public Utility District
25 No. 1, which will own that particular facility, has a contract
26 with you now to give you 100% of the output through the year
27 2012. What's the output after 1978? Is it always 410 mega-
28 watts, or is it going to have more output?

1 A No, it will be 410.

2 Q So for all practical purposes this is a reliable firm with
3 resources available to you until the year 2,000?

4 A Yes.

5 Q That's a long time, 25 years?

6 A Yes.

7 Q Now, if you look at the last year, Mr. Knight, 1985-86, that
8 appears on the third page of Exhibit No. 18-B, the first
9 revised edition of that exhibit shows that for peak you
10 would have a deficiency without the Colstrip units 3 & 4 of
11 some 233 megawatts. That has been more than trebled now on
12 the new revised edition, right?

13 A I'll have to compare them.

14 Q Take a look.

15 A (PAUSE) That is correct.

16 Q Similarly, with the Colstrip units, it should come as no
17 surprise after that information, to know that you now project
18 a deficiency of 410 megawatts of peak energy in the year
19 1985-86, when nine months earlier you had projected a surplus
20 of 65 megawatts. Your system load on both of those exhibit
21 editions is exactly the same, 4,177 peak megawatts. Right?

22 A That's correct.

23 Q So obviously we can conclude that the reason that you now show
24 so much more by way of deficiency is that you have fewer
25 resources available to you in December than you thought you
26 would in March, right?

27 A That is correct -- no, not since I talked to you in March.
28 Well, six months -- we've got a delay of six months on

1 our nuclear plants.

2 Q The reason that you show this deficiency of that rather
3 substantial amount, some 410 megawatts, with Colstrip, and
4 708 without Colstrip, is that one of your nuclear plants
5 was delayed?

6 A That's right.

7 Q Delayed, I take it, so that it's going to be another ten
8 years before it comes on stream from now? Is that right?

9 A It will be on stream, yes, just about ten years. We figure
10 it will be February of 1986.

11 Q But I take it this is consistent with your earlier testimony,
12 Mr. Knight, that the way you'll meet that problem is to buy
13 surplus power elsewhere in the region?

14 A If it's available, yes.

15 Q Well, you now see the regional forecast to suggest that it
16 will be available, isn't that right?

17 A I would have to look to make sure of that year, but that's
18 ten years out.

19 Q That's what your current plans are, aren't they?

20 A That's what the current plans are.

21 Q Looking at Exhibits 18-C and 18-D, Mr. Knight, those are
22 both exhibits in which you describe your resources in a graphic
23 manner, your peak on Exhibit 18-D and your energy on Exhibit
24 18-C, both with and without the Colstrip Units 3 & 4; and it
25 is true, is it not, sir, that on both of those exhibits the
26 assumption is precisely as it is in your other compilations
27 of resources, that you are dealing with critical period water?

28 A That is correct. It doesn't make any difference as far as

1 peak is concerned, though.

2 Q Okay. It does make a difference as far as energy is concerned?

3 A Well, if we had better than critical water our hydro resources
4 would be increased.

5 Q Have you ever heard the term median water adder?

6 A I've heard of it.

7 Q You've never used it?

8 A No, sir.

9 Q What does it mean?

10 A I don't know what it means. I said I'd heard of it.

11 Q You don't use it because you don't know what it means,
12 probably?

13 A That's right.

14 Q That seems fair. Now, Mr. Knight, when you refer to the
15 region, as you have several times in your testimony, you're
16 referring to the Pacific Northwest region that is generally
17 encompassed within the Pacific Northwest Power Pool, is that
18 right?

19 A Yes. The West Group of the Northwest.

20 Q The West Group who makes a forecast called "The West Group
21 Forecast."

22 A Right.

23 Q Has that group done any regional load forecasting and resource
24 planning other than to compile the individual inputs of the
25 members of the group?

26 A They do not do regional forecasting.

27 Q In fact, our friend Mr. Nogle, who sits here anxiously waiting
28 to succeed you as a witness, has been for some years back now

1 the compiler of the data that comes in from the various
2 members of the group?

3 A He gets all the work.

4 Q When your deposition was taken last year, Mr. Knight, you had
5 not as of that time known of any studies that had been done
6 except for inhouse utilities studies on load forecasting or
7 projecting by the group as a whole, is that true?

8 A Yes.

9 Q Is Kent Anderson still doing work for the Power Pool in order
10 to assist them in load forecasting?

11 A Well, he's developing a model for that purpose.

12 Q Is he making some progress with that?

13 A I understand he is.

14 Q When did you last attend a meeting of the group in which he
15 participated?

16 A I don't believe I've attended a meeting since last spring
17 prior to the deposition.

18 Q Does anybody else in Puget Sound participate in the group
19 processes in which Mr. Anderson might be involved?

20 A Yes.

21 Q Does Mr. Swartzell also?

22 A That's right.

23 Q I believe your understanding to be, Mr. Knight, that if to
24 the east of the Montana Power system there were either a
25 surplus of a deficiency of power, that would be of comparative-
26 ly little consolation to you sitting 1200 miles west of here,
27 because there's inadequate interconnection between the eastern
28 and western parts of the Montana area?

1 A I think there are very weak interconnections, yes.

2 Q Shouldn't that be something of concern to you?

3 A It has been a concern for a lot of people for a number of

4 years, how to strengthen those east-west inter-ties.

5 Q What are you doing about it?

6 A Me? I'm not doing anything about it.

7 Q Your application for the Colstrip energy and capacity is

8 based upon the assumption that you're going to be doing some

9 wheeling of power, isn't that right?

10 A That's correct.

11 Q Where are you going to wheel?

12 A Where am I going to wheel? To my system from the grid.

13 Q Is that the only place you're going to wheel?

14 A Yes.

15 Q Are you not going to do any wheeling from your system else-

16 where into the grid?

17 A Well, I --

18 Q You wheel both ways, don't you?

19 A Yes. Whenever we interchange power with other people, and

20 a third party in between the parties, yes, we wheel power for

21 somebody else, or somebody else wheels for us.

22 Q You would expect to do that in the future, would you not?

23 A Certainly.

24 Q Do you have any present contractual relationships with utilities

25 outside of the Pacific Northwest?

26 A Yes.

27 Q Which ones?

28 A Utah Power & Light.

1 Q Anyone else?

2 A Salt River Power.

3 Q What's your agreement with Utah Power & Light?

4 A It's along the lines of my delivering them some summertime
5 energy, and their returning some wintertime energy to me.

6 Q Have you done any overall forecasting and planning with Utah
7 Power & Light Company, besides this contractual relationship
8 you have?

9 A No, not directly. We know of the plants that they are pro-
10 posing to get permits to build.

11 Q They report that to whatever system they belong to and that's
12 available information for you to read?

13 A Yes.

14 Q At one time Puget had made a rather brief study on the analysis
15 of impact of construction delays on Colstrip Units 3 & 4 as
16 to the effect that would have on Puget. Do you remember that?

17 A Not specifically.

18 Q Do you recall any conclusions formed as to what effect con-
19 struction delays at Colstrip Units 3 & 4 would have on you?

20 A I can look at these numbers and tell you what impact it has
21 on our resources, yes.

22 Q Did the study do anything other than add and subtract numbers?

23 A That's about what it does.

24 Q Do you still adhere to the view, Mr. Knight, that it is
25 generally a sound principle to build your generating capacity
26 closest to your load centers?

27 A As a general thing, without being specific, because there's
28 many, many other things that have to be taken into consideration.

1 Q It's a fair statement, is it not, sir, that the reason that
2 Puget originally came to Montana and participated in the
3 Colstrip Units 1 & 2 was that the power was available here?

4 A That was one of the reasons, yes.

5 Q That was the main one, wasn't it?

6 A Well, the fact that it was an economical power source was
7 another one.

8 Q Colstrip 1 & 2, in your view, were a substitute for other
9 resources on a time basis, isn't that right?

10 A Well, if it hadn't been for 1 & 2, we would have had to had
11 some other resources, yes.

12 Q Having 1 & 2 available to you, you didn't have to cover those
13 with other resources?

14 A That's right.

15 Q And as far as your concern at Puget, you did not look for
16 alternate sites for the Colstrip Units 1 & 2, did you?

17 A No, I did not.

18 Q So we don't have to pick on you the way we picked on poor
19 Mr. Labrie on that subject?

20 A Thank you.

21 Q You're welcome. Had it ever occurred to you, Mr. Knight, as
22 the second largest owner of the Colstrip units, to examine the
23 environmental impact of Colstrip on the closest population
24 center to the Colstrip units?

25 A No.

26 Q By the way, Mr. Knight, in the initial discussion of Colstrip
27 Units 3 & 4, speaking of your ownership of those units, you
28 were for some time designated as a 50% owner instead of a 25%

1 owner, isn't that right?

2 A I don't believe designated, no.

3 Q Well, the letters of intent that went back and forth among
4 the companies, you were up to 50%, isn't that right?

5 A Well, we had option rights to acquire 50% if we wanted it.

6 Q Why did you opt for 25% instead of 50%?

7 A The main reason was that we were proceeding with our Skagit
8 plant, and 50% wouldn't have worked in with our loads and
9 resources.

10 Q Is it within your department now, Mr. Knight, to take a look
11 at the cost of providing generating units?

12 A Well, normally, before we move ahead we look at that, the
13 Construction Department handles it after the decision is to
14 go ahead.

15 Q You would agree, would you not, with Mr. Davis' projection
16 when his deposition was taken last year that Puget's share
17 of the cost of Units 3 & 4 at Colstrip would be \$250 million,
18 as of that time? I suppose that may have escalated since
19 then, but as of that time at any rate?

20 A Yes, that was an estimate, if I remember correctly. If you
21 divide 776 by a quarter, you'd get that answer; that's
22 slightly less than what that statement is.

23 Q Did you have a view in April of 1975 as to what Puget's share
24 of the expenses of Colstrip Units 3 & 4 would be?

25 A At this time I don't have a specific idea of what it was at
26 that time.

27 Q What do you think it is now?

28 A Well, having set here and listened to the testimony, it's

1 776 million for the cost of the two units, and we have 25%
2 of it.

3 Q Do you think that in the months that have intervened since
4 April of last year that there's some reason why the costs
5 of 3 & 4 should have decreased?

6 A I'm not sure that they did decrease.

7 Q If it was Mr. Davis' testimony nine months ago that Puget's
8 share was \$250 million, and you had 25% of the interest in
9 the two units, you would agree with me it's not very compli-
10 cated arithmetic that the total cost would be a billion dollars
11 at that time, wouldn't that be right?

12 A That is correct, and I don't know whether Mr. Davis was think-
13 ing of the transmission lines and wheeling costs, or what he
14 was thinking of, and I'm sure Mr. Davis does not keep real
15 close to individual numbers on a day-to-day basis.

16 HEARINGS EXAMINER: Whenever you get to a convenient
17 place, I presume we should adjourn for the day.

18 MR. SHENKER: Okay, Mr. Davis.

19 Q You still sit on the Board of Directors of the Puget Sound
20 Power & Light Company, do you not?

21 A No, I do not.

22 Q You're a Vice President of the Company?

23 A That is correct.

24 Q This last question, so that we can quit -- it's past 5:00
25 o'clock, and the other Mr. Davis has suggested we might
26 conclude here -- do you share the view expressed by Mr. Ralph
27 Davis that in the event that the Colstrip units should fail
28 to comply with the State and Federal Air and Water Quality

1 Standards, that Puget Sound Power & Light Company should
2 either direct or participate in the direction of shutting
3 down those plants?

4 A I'm sure that if they do not comply they will be shut down.

5 Q Well, there are folks who may feel that way, and others who
6 may feel differently. That really wasn't my question. I'm
7 asking you whether you personally share the views of Mr. Ralph
8 Davis, expressed in his deposition, in the event of noncompli-
9 ance, Puget would either direct or participate in the direction
10 that those plants be shut down.

11 A That is probably not a decision I would make, but that same
12 type of thing came up in Centralia, and the owners, including
13 Puget and all of them, did direct that that plant, Centralia,
14 would not load up where they didn't meet the air quality
15 standards. And I think that's an evidence of how the utilities
16 operate. I'm sure it would be repeated with Colstrip by the
17 owners, the same as was done at Centralia.

18 Q Washington standards are known to be far less restrictive
19 than Montana's.

20 A They are no less restrictive if you're meeting it or you aren't
21 meeting it. It's a yes or no thing.

22 Q Whatever you're meeting in Washington is less restrictive than
23 what you have to meet in Montana, is that not the case, sir?

24 A That may be very well, but we have a different unit, too.

25 Q The same size.

26 A Not the same equipment, though.

27 MR. SHENKER: I think any other areas we'd get into
28 with this Mr. Knight would take us a little more than a

1 few minutes, Mr. Davis, if you want to pause.

2 HEARINGS EXAMINER: Very well. Gwen's had a long
3 day, we have to have some consideration, so we'll
4 adjourn.

5
6 (RECESS, 5:05 P.M.)

7
8 * * * * *

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in financial reporting.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It includes a detailed description of the experimental procedures and the statistical analysis performed.

3. The third part of the document presents the results of the study. It includes a series of tables and graphs that illustrate the findings of the research. The data shows a clear trend of increasing activity over time.

4. The fourth part of the document discusses the implications of the findings. It suggests that the results have significant implications for the field of research and may lead to further developments in the future.

5. The fifth part of the document concludes the study. It summarizes the main findings and provides a final statement on the importance of the research.

